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A. E. J. ENGEL -- U.S.G.S. and California Institute of Technology

D. F. HEWITT -- Ontario Department of Mines

A. WILLIAMS POSTEL -- U. S. Geological Survey

MATT WALTON -- Yale University

JOHN G. BROUGHTON (ex officio) -- State Geologist

SIMON SCHAFFEL, of Rutgers University and the City College of New York, is making a detailed structure and petrofabric study of some of the granites and granite gneisses in the vicinity of Bear Mountain.

S. F. THOUMSIN, of Rutgers University and the University of Pennsylvania, is completing his studies of Adirondack magnetite-martite ores.

MATT WALTON, of Yale University, spent the summer of 1953 mapping the Precambrian geology of the Port Henry quadrangle. This is a State Science Service project.

PALEOZOIC--PALEONTOLOGY, STRATIGRAPHY and GENERAL GEOLOGY

HAROLD L. ALLING, professor emeritus of the University of Rochester, is completing a manuscript on the "Petrology of the New York Cayugan series."

JOHN ANASTASIO, of Syracuse University, has completed a master's thesis on the fauna of the Jamesville limestone with special emphasis on the stromatoporoids.

CHRISTINA LOCHMAN BALK continued her investigation of Lower Cambrian Schodack fossils from Washington county. Mrs Balk is associated with the New Mexico Bureau of Mines & Mineral Resources.

JEAN M. BERDAN, of the U. S. Geological Survey, reports that collections of ostracodes from the Coeymans and New Scotland formations have been prepared and are being studied as a part of a long-range project on the description of ostracode faunas from type sections of the Ordovician, Silurian and Devonian formations of New York. Ostracodes from the Becraft limestone have been collected and are being prepared. During a two-week trip in the Hudson valley in September 1953, with R. S. Boardman of the Geological Survey, additional collections of ostracodes and bryozoa were made from the Coeymans and Kalkberg limestones and new material was collected from the Alsen, Port Ewen and Glenerie formations. Work is also continuing on fossils from the two test holes drilled in connection with the Manning Peat Bog project of the Mineral Deposits Branch of the U. S. Geological Survey.

HARVEY BLATT was obliged to discontinue his study of the Fall Creek conglomerate. His collections and field notes are at Cornell University. This work was in part supported by a New York State Science Service Student Honorarium.

RICHARD S. BOARDMAN, of the U. S. Geological Survey, began in January 1952 a study on the trepostomatous and rhomboporoid Bryozoa of the Hamilton group of New York State. Parts of the past two field seasons have been spent collecting material, which, added to the collection in the U. S. National Museum, completes the gathering of the material to be examined. Some 1500 thin sections have been prepared with more to come. The work will be continued during 1954.

J. C. CRADDOCK, of Columbia University, has completed mapping in the Kinderhook quadrangle. A manuscript (his Ph. D. thesis) is now in preparation. This work was supported by a New York State Honorarium grant.

EDWARD DE GROFF, of Syracuse University, completed his master's thesis on the "Joints and Joint Patterns in Central New York." His work was done on the limestones and shales of the plateau front in Onondaga county, with observations in adjacent counties.

JAMES DUNN and DONALD FISHER have in press a paper on the occurrence, properties and paragenesis of anthraxolite (an anthracite-like product) in the dolomites of the Mohawk valley.

G. M. EHLERS and E. C. STUMM, of the University of Michigan, have had published "Species of the tetracoral genus Billingsastraea from the Middle Devonian of New York and other regions" in the Bulletin of the Buffalo Society of Natural Sciences, Vol. 21.

WILLIAM R. EVITT, of the University of Rochester, has been studying microfossils from the Hamilton of western New York. One paper describing four forams and another describing a large group of microfossils of uncertain affinities are nearing completion. This investigation was supported by State funds.

Evitt and HARRY B. WHITTINGTON, of Harvard University, published an article on the exoskeleton of the trilobite Flexicalymene in the Journal of Paleontology (1953).

ELLIS FERNALLD, of Syracuse University, has completed a master's thesis on the stratigraphy and structure of the Elmwood formation in central New York.

DONALD W. FISHER, of the New York State Museum, has submitted a manuscript on the stratigraphy of the Medinan group. Investigation is currently in progress on a Silurian barnacle which may be an ancestor of the modern cirripeds. Some silicified Mohawkian and calcareous Hamiltonian ostracodes are under investigation. It is anticipated that mapping of the Canajoharie and Fonda quadrangles will be completed this coming summer. Work on the tentaculitids progresses.

WINIFRED GOLDRING, of the New York State Museum, has a paper concerning Devonian crinoids in press (N.Y.S. Mus. Circ.). Her studies on crinoids are continuing.

HUGO GREINER, of Yale University, is engaged in an evolutionary study of "Spirifer" disjunctus in the Upper Devonian Catskill delta. This study is an effort to determine the modifications of this spiriferoid due to environment and time.

FRED T. HALL, director of the Buffalo Museum, reports that the museum published Second Paleontological Contributions, dealing with stratigraphy and paleontology of western New York with papers by Ehlers and Stumm, Fisher, Kesling, Ross and Sargent.

WILBERT H. HASS, of the U. S. Geological Survey, has been studying the stratigraphic ranges of conodont genera and species in the Upper Devonian of western New York.

FRANK D. HOLLAND jr, of the University of Cincinnati, is working on the fauna of the Upper Devonian Oswayo formation of southwestern New York and northwestern Pennsylvania. This study is for the Ph. D. degree.

DONALD M. HOSKINS, of the University of Rochester, is studying silicified fossils etched from the Chaumont limestone of the Watertown area as part of his work toward a master's degree. Brachiopods, ostracods and trilobites will be included in the study. This work was in part supported by a New York State Science Service Student Honorarium.

JOHN JOHNSEN, of Vassar College, is continuing his stratigraphic investigation of the Schoharie--Carlisle Center relationships in the Hudson valley and extending into New Jersey.

MEREDITH JOHNSON, State Geologist of New Jersey, reports that ostracoderm remains have been found in the High Falls formation, a short distance south of Port Jervis, New York.

ROBERT V. KESLING, of the University of Michigan, has had published "A Beyrichid Ostracod from the Middle Devonian Wanakah shale of western New York" in the Bulletin of the Buffalo Society of Natural Sciences.

CLINTON KILFOYLE, of the New York State Museum, has completed the monumental task of cataloging the type specimens of fossils in the State Museum. The type catalog is currently in press and it is anticipated that it will be ready for distribution by June.

JACK KRATCHMAN and DESH SIKKA, of New York University, are investigating certain phases of sedimentation of the Hudson river.

JOHN H. LaGRANGE, of Syracuse University, is doing a master's thesis on the "Stratigraphy of the Janesville Formation" covering its entire zone of outcrop in central New York State.

WILLARD P. LEUTZE, of Syracuse University, is working on the stratigraphy and paleontology of the Camillus formation in the Syracuse region.

LOUIS LIPPITT, of Columbia University, has completed a statistical study of the Cobourg limestone in Lewis and Jefferson counties and has mapped the formation on standard 15-minute quadrangles. This work was in part supported by a New York State Science Service Student Honorarium.

SHEPARD LOWMAN, of Rensselaer Polytechnic Institute, is continuing his investigation of the sedimentology of the Deepkill formation.

BESSIE LJOSTAD, of New York University, is continuing her study of the geology of the area in Westchester county from Hastings to Montrose between the Hudson river and route 9.

WILLIAM A. OLIVER, of Brown University, has in press a paper on his biostratigraphic study of the Onondaga Limestone in central New York. During the past summer this work was extended east and south along the outcrop belt to Port Jervis. A summary of the stratigraphic relationships of basal biostromes and bioherms was presented at the Toronto meeting of the G.S.A. This work is being supported by the New York State Science Service.

LAWRENCE V. RICKARD, of Cornell University, in the course of geologic mapping of the Richfield Springs quadrangle, discovered a facies relationship between the Manlius and Coeymans limestones. Further investigation revealed that the proverbial "Manlius--Coeymans unconformity" does not exist and that the uppermost Manlius at Syracuse conceivably is of New Scotland or Becraft age. Future detailed lithostratigraphic, biostratigraphic and paleoecologic studies will constitute his Ph. D. thesis.

JOHN RODGERS, of Yale University, continued geologic mapping of the Cambrian and Ordovician strata in the Ticonderoga quadrangle. Work is nearing completion in the Vermont portion of the quadrangle.

MARY HARVEY ROSS, formerly of Cornell University, has had her Ph. D. thesis on the Favositid corals of the Hamilton Group published in the Bulletin of the Buffalo Society of Natural Sciences.

DAVID M. SCOTFORD, of Miami University of Ohio, has completed mapping the southern half of the Peach Lake sheet as well as the northern half of the Poundridge sheet and one-mile strip along the eastern sides of the Croton Falls and Mount Kisco sheets.

LEWIS E. STOVER, of the University of Rochester, is working on the stratigraphy and paleontology of the Moscow formation between the Genesee River and Lake Erie. The field stratigraphic study is complete and micropaleontological study underway. This work was in part supported by a New York State Science Service Student Honorarium.

ROBERT G. SUTTON, of Johns Hopkins University, has completed his stratigraphic and paleontologic study of the Upper Devonian Naples Group for the Ph. D. degree. It is anticipated that his final report will be published as a New York State Museum bulletin.

FRANK M. SWARTZ, of Pennsylvania State College, will submit the following for publication at an early date:

"Ostracoda from Late Silurian Decker, Rondout and Manlius limestones in New Jersey and Eastern New York." This includes material from the Manlius limestone at Alsen's Glen.

"Ostracoda from Tonoloway and otherSilurian sediments of the Middle Appalachians." This includes some material from the Cobleskill limestone.

IRVING TESMER, of Syracuse University, has submitted a paper entitled "Restudy of Upper Devonian Stratigraphy and Paleontology in Southwestern New York." This is to be published as a New York State Museum Circular. Geologic mapping of the Cherry Creek quadrangle is complete and when present mapping of the Dunkirk and Westfield quadrangles is finished, all will be incorporated into a single New York State Museum Bulletin.

A. SCOTT WARTHIN, of Vassar College, has submitted a progress report on the geology of the Poughkeepsie quadrangle. Work is continuing in the same region.

HARRY B. WHITTINGTON, of Harvard University, continues his trilobite studies, some of which concern New York State geology. His investigations of the bathyurids and leiostegiids were published in the Journal of Paleontology, Vol. 27 (1953).

GLACIAL GEOLOGY

BERNHARD E. FELBER, a student in Columbia College, completed a report on glacial features to be seen today in northwestern Long Island, as a project in a course under Professor Hall Taylor.

JOHN MOSS, of Franklin and Marshall College, spent approximately six weeks of the summer of 1953 mapping glacial deposits in south central New York. He was assisted in this work by COPE MACCLINTOCK and JOHN RANDALL.

PAUL MACCLINTOCK, of Princeton University, continued his survey of the Pleistocene history of the St Lawrence valley region as a New York State Science Service project. Detailed mapping was completed from Ogdensburg to Malone. MacClintock was assisted in the field by JOHN C. OSTROM, ALBERT LASALA and DAVIS LAPHAM. This work is directed not only toward elucidation of the glacial history of northern New York, but also to locate surficial deposits which will be of use in engineering projects.

DONALD E. OUTLAW, of the U. S. Geological Survey, continued work on the text, illustrations and data for a U.S.G.S. "open-file report" entitled "A Geologic and hydrologic study of Schackham Brook watershed, New York State."

ROBERT LA FLEUR, of Rensselaer Polytechnic Institute, is mapping the glacial geology of Rensselaer county as his doctoral dissertation.

MILTON MARKS, of Syracuse University, is making a study of the sand and gravel deposits in the vicinity of Syracuse. This study is primarily concerned with composition and size analysis of the deposits. This will be submitted as a master's thesis.

EDWARD HASSAR, of Syracuse University, is studying the characteristics of the Lake Iroquois sediments along the New York State Thruway in eastern Onondaga county for his master's thesis.

DAVID P. STEWART, of Marshall College and Syracuse University, completed the field work for an investigation of Pleistocene Geology in the Watertown and Sacket's Harbor quadrangles. Detailed mapping was done on 7½-minute quadrangles. This work was partially supported by a New York State Science Service Honorarium and will be integrated with MacClintock's work in the St Lawrence valley.

ECONOMIC GEOLOGY (exclusive of Precambrian)

Ground-water studies in upstate New York were continued during 1953 by the USGS under the general direction of J. E. UPSON and ERWIN ASSELSTINE. The program carried on cooperatively since 1945 with the State Water Power and Control Commission and also for three years with the State Science Service, is designed to appraise the extent of the State's ground-water resources to permit fuller utilization and conservation. Hydro-geological studies financed by the Atomic Energy Commission also were continued during the past year by the Survey at the Knolls Atomic Power Laboratory and in its general vicinity.

Field studies of ground-water conditions by means of county-by-county surveys were actively conducted and concentrated in four counties in 1953. In Dutchess and Putnam counties additional data were needed for adequate coverage and collected by WALTER WETTERHALL and IRVING GROSSMAN, respectively. Well-inventory work was done in Oneida county in preparation for geologic and hydrologic mapping by HARRY WILSON. Collection of data for a ground-water report of Westchester county was considerably advanced and the work was done by E. T. SIMMONS. Four reports were either published or placed under printing contract as follows:

Water-resources of the Rochester area--USGS Circular 246

The ground-water resources of Bronx, New York and Richmond counties--State Bulletin in publication

The ground-water resources of Washington county--State Bulletin in publication

Water level and artesian pressure in observation wells in northeastern States in 1950 (Upstate section p. 259-72) --USGS Water Supply Paper 1165.

As part of the work for the AEC; Knolls Laboratory, a station was established in 1953 on the Mohawk river at Cohoes to measure daily discharge of suspended sediment and of dissolved minerals. It is expected that operation of this station will be continued indefinitely. In addition, similar stationswere operated on Glowegee and Kayaderosseras creeks (Saratoga county) and on the Mohawk river at Vischer Ferry dam. These stations will be discontinued after two years of record. The stations are the first of their kind in New York State. The work was carried on by E. S. SIMPSON, F. H. RUGGLES and W. A. BEETEM of the Geological Survey.

Field work of the New York State Limestone Survey was continued this year through the months of July and August.

The general organization of the field work was the same as in previous years. The State Science Service, under the direction of JOHN G. BROUGHTON, employed NEWTON E. CHUTE, of Syracuse University, and the late RALPH DIGMAN, of Harpur College, to carry out the geological mapping. Two graduate students, JOSEPH GILG and HAROLD HERZOG, assisted the geologists. The College of Ceramics placed a party of seven in the field under the direction of D. A. DICKENS. Chute completed his field work in Ulster, Sullivan and Orange counties. Digman almost completed the geologic field work for St Lawrence county. In the latter, particular attention was made to potential quarry sites as sources of cement aggregate for the St Lawrence Power Project.

Sampling was accomplished using two methods. D. ARMSTRONG, H. SEVERIN and W. ROBBINS supervised by R. R. WEST, obtained channel samples. Dickens, H. KAST and R. PHILLIPS operated a diamond drill machine to take core samples.

New equipment acquired by the College of Ceramics enabled the drilling crew to expand their field of operation this year. A new truck to carry equipment and to haul the drill rig was purchased. Also a new portable water pump and water reservoir tank made it possible to drill at any spot to which the rig could be hauled. (In previous years, an adequate supply of water had to be available within 200 ft. of the drilling site.)

During the 1953 field season 38 sampling sites were worked, resulting in 34 core samples and 98 channel samples.

The distribution of the 1953 samples is shown in the following table:

Formation	Franklin County	Herkimer County	Onondaga County	Otsego County	St Lawrence County	Ulster County	
Alsen	-	-	-	-	-	1	1
Becraft	-	-	-	-	-	3	3
Clark Reservation	-	-	4			-	4
Cobleskill	-	-	2	-	-	-	2
Coeymans	-	8	-	-	-	-	8
Coeymans Transition	-	7	-	-	-	-	7
Elmwood	-	-	12	-	-	-	12
Jamesville	-	-	3	-	-	-	3
Manlius	-	3	-	-	-	1	4
New Scotland	-	1	-	-	-	1	2
Ogdensburg	2	-	-	-	44	-	46
Olney	-	-	7	-	-	-	7
Onondaga	-	10	8	2	-	6	26
Pools Brook	-	-	2	-	-	-	2
Port Ewen	-	-	-	-	-	2	2
Rondout	-	-	1	-	-	2	3
Total Samples	2	29	39	2	44	16	132

CHARLES R. FETTKE, of the Carnegie Institute of Technology, reports that he has almost completed a subsurface structure-contour map on the top of the Oriskany formation, scale 1/250,000, contour interval 100 feet with accompanying text. The map will be published by the Pennsylvania Geological Survey in the near future. It covers the plateau region of north-central and western Pennsylvania. On the north, it includes the first two tiers of quadrangles in New York State as far east as the Owego quadrangle.

He is also preparing a collection of well-sample records for publication that are based upon examinations of drill cutting samples from deep wells in a strip that extends across northern Ohio and northern Pennsylvania, including adjacent parts of southern New York. Fettke plans to construct an east and west subsurface stratigraphic section across the northern part of the Allegheny synclinorium as part of the report.

GERALD M. FRIEDMAN, of the University of Cincinnati, studied the reactions of spinel and silica in the emery deposits of the Cortland complex, Westchester county. The results of this investigation are now in press in the Journal of Geology. A manuscript on the emery deposits of Cortland township, Westchester county, has been completed and is being published as one of the New York State Museum Circular series.

JOHN A. GRAHAM, of the New York State Science Service, completed the manuscript and illustrations for "Mining and Quarry Industries of New York State, 1949 and 1950." This will be in more concise form than other such reports and will incorporate graphs to show production trends.

W. L. KREIDLER, of the New York State Science Service, continued the long-range project of oil and gas well record compilation and study. He was assisted in this by JAMES W. WIGGINS and RICHARD C. ROWE, of the Science Service Wellsville office. Wiggins has partially completed a log of the E. C. Kesselring well, which is the world's deepest drilled by cable tool. This well stopped at 11,145 feet in the Theresa formation. The log and sample study of the Kesselring well will be published as a New York State Museum Circular as was the Buchanan well which was submitted for publication in 1953. Kreidler spent one month of the 1953 field season checking minor structures in the Paleozoic rocks of central New York. A large part of his effort in 1953 was devoted to investigation of various types of geologic formations in the eastern United States for underground storage of petroleum products. This is an Interstate Oil Compact Commission project. He was assisted in New York State by Wiggins.

During the summer of 1953 members of the U. S. Geological Survey's Appalachian Fuels project continued their regional study of the petroliferous black shales and associated rocks of Late Devonian age in western and west-central New York under the direction of JAMES F. PEPPER. WALLACE de WITT jr and GEORGE W. COLTON assisted by JESUS RUIZ ELIZONDO and HENRY STIPP measured sections of these Upper Devonian rocks by plane table and telescopic alidade in parts of Erie, Wyoming, Livingston, Ontario, Steuben and Yates counties. Most of the sections measured included the rocks in the interval between the top of the Moscow shale and the base of the Rhinestreet shale.

Drafting and the text have been completed on an Oil and Gas Investigations Chart entitled "Stratigraphy of the Late Devonian West Falls formation in western and west-central New York." This chart by Pepper, de Witt and Colton describes the various rock units in the interval between the base of the Rhinestreet shale and the base of the Pipe Creek member of the Hanover shale in an area from eastern Chautauqua county eastward to eastern Yates county.

Geologic field mapping continued on the Attica, Dale, Geneseo and Leicester 7½-minute quadrangles. Mapping of the Eden and Hamburg 7½-minute quadrangles was completed early in the summer. Texts to accompany the geologic maps of the Eden and Hamburg quadrangles are presently being prepared.

In the summer of 1954 Colton plans to continue the study of the rocks in the interval between the top of the Moscow shale and the base of the Rhinestreet shale in the area between western Erie county and eastern Yates county. If funds are available, field mapping of the Attica and Dale 7½-minute quadrangles will be completed and some sections will be measured in Schuyler and Chemung counties.

RUSSELL SMITH completed a master's thesis in June 1953 on "Correlation of the Producing Sands in the Richberg Area, Allegany county, New York." The field work for this thesis was done in the summer of 1952 and involved a subsurface study of well logs and samples of the Empire Gas and Fuel Company.

GEOPHYSICS

A. F. BUDDINGTON, JAMES BALSEY AND J. FAHEY , of the U. S. Geological Survey, are continuing their joint work on the subject of "The Oxide Minerals and Geology of the Northwest Adirondacks and Their Correlation with Magnetic and Aeromagnetic Data." Additional oriented specimens were collected and ground magnetometer surveys and profiles were made of critical localities to aid in the interpretation of the aeromagnetic survey. The composition of the oxide minerals and the magnetic properties of each of about 200 rocks are being determined in the laboratory. In addition, heating and magnetic experiments are being conducted in an attempt to determine the nature of the reverse remnant magnetization, a characteristic of some of these rocks.

ROBERT J. BEAN, of Harvard University, published his paper, "Relation of Gravity Anomalies to the Geology of Central Vermont and New Hampshire," in Bull. Geol. Soc. America, Vol. 64, No. 5, p. 509-38, 1953.

W. J. DEMPSEY, of the U. S. Geological Survey, has completed two east-west lines of an aeromagnetic survey between 41°30' and 41° 45' N latitude from 75°15' W longitude to the Atlantic coast. This survey, crossing the southern tip of the State, has been undertaken as part of the study of the broad features of the Appalachian and related structures.

WILLIAM H. DIMENT, of Harvard University, completed his doctoral thesis entitled, "Gravity in Vermont, Massachusetts, and New York." This work includes only the easternmost part of the Adirondacks.

GILBERT WASSERMAN, of New York University, is making a magnetometer survey of Staten Island.

THESES ON N. Y. STATE GEOLOGY

PRECAMBRIAN GEOLOGY

AGATSON, ROBERT S. -- The structure and lithology of the Inwood limestone. 1947 M.A. -- Columbia University

AHMED, MESBAHUDDIN -- The Brewster magnetite deposit. 1948 M.A. -- Columbia University

AVENIUS, RODNEY -- Petrology of the Cheney Pond Area, Adirondacks, N. Y. 1948 M.S. -- Syracuse University

BLACK, ROBERT FOSTER -- A preliminary geological report of the Huntington Forest. 1942 A.M. -- Syracuse University

BODENLOS, ALFRED J. -- A study of metamorphic structures, White Plains, New York and vicinity. 1942 M.A. -- Columbia University

BUSH, ALFRED L. -- Petrology of zinc ores at Edwards, St Lawrence County, New York. 1946 M.S. -- University of Rochester

CHENOWETH, PHILIP A. -- The pegmatite dikes of Manhattan Island, New York. 1947 M.A. -- Columbia University

COATES, DONALD R. -- Structure of gneiss hills near Schunemunk Mountain, New York. 1948 M.A. -- Columbia University

CRAFTS, SHIRLEY -- Origin of the feldspar pegmatites near Batchellerville, Saratoga County, N. Y. 1947 M.S. -- Cornell University

CUSHING, HENRY P. -- Geology of the Thousand Island Region. 1909 Ph. D. -- Cornell University

DIETRICH, RICHARD V. -- Precambrian geology of the Brier Hill quadrangle. 1951 Ph. D. -- Yale University

DINCER, HIKMET -- The southernmost extension of Grenville limestone in Peekskill, New York. 1951 M.A. -- Columbia University

DOBRIN, STEFANIE Z. -- The gamma ray radioactivity of pegmatites in New York City. 1949 M.A. -- Columbia University

DODGE, NELSON -- Petrology, structure, and age relations of the granites and syenites of the Childwold quadrangle, New York. 1936 M.S. -- University of Rochester

HOWD, FRANK -- Geology of the northwest quarter of the Bolton quadrangle, New York. 1953 M.S. -- University of Rochester

HUSSAIN, MEHDI -- The serpentine of Staten Island. 1948 M.A. -- Columbia University

KLEMME, DANIEL NORMAL -- The Precambrian of Little Falls, petrographic and structural studies of the gneiss in relation to a theory of origin. 1942 M.S. -- Syracuse University

KRIEGER, MEDORA H. -- Geology of the 13th Lake quadrangle, New York. 1943 Ph. D. -- Columbia University

LECOUNT, DOROTHY A. -- A study of the Inwood marble in the vicinity of Pleasantville, New York. 1947 M.A. -- Columbia University

LEVIN, S. BENEDICT -- Genesis of some Adirondack garnet deposits. 1948 Ph. D. -- Columbia University

LOWE, KURT E. -- Storm King granite at Bear Mountain, New York. 1947 Ph. D. -- Columbia University

MACK, SEYMOUR -- Petrography and structure of some non pegmatite dikes in the Hudson Highlands. 1950 M.S. -- Syracuse University

MASLOWSKI, EDITH -- Pegmatites of the Batchellerville and Overlook areas, Adirondacks, N. Y. 1944 M.S. -- Syracuse University

NAGELL, RAYMOND -- Geology of the Philadelphia quadrangle, Jefferson County, New York. 1952 M.S. -- University of Rochester

PAULUS, FRED -- Geology of Grindstone quadrangle, Jefferson County, New York. 1950 M.S. -- University of Rochester

PINCUS, HOWARD J. -- Statistical techniques applied to the study of rock fractures. (Ward-Poundridge Reservation, Westchester County) 1948 M.A. -- Columbia University

ROGERS, CLEAVES -- Geology of the Raquette Lake quadrangle. (date unknown) Ph. D. -- Princeton University

WOODMANSEE, HELEN -- Geology of the Grenville Series of an area in the southern part of the Hammond quadrangle, N. Y. 1950 M.S. -- Syracuse University

WOODMANSEE, WALTER -- Geology of the igneous rocks and orthogneisses of an area in the southern part of the Hammond quadrangle, N. Y. 1950 M.S. -- Syracuse University

PALEOZOIC GEOLOGY

AGATSON, ROBERT S. -- The structure and lithology of the Inwood limestone. 1947 M.A. -- Columbia University

AGEY, CHARLES -- The Pavilion Gas Field, New York. 1934 M.S. -- University of Rochester

APSOURI, CONSTANTIN N. -- Contributions to the study of the Oriskany sandstone, Basal Onondaga, and the contact thereof. 1934 A.M. -- Syracuse University

BERDAN, JEAN -- Ostracodes and brachiopods of the Cobleskill and Manlius formations. (date unknown) Ph. D. -- Yale University

BOLTON, BEATRICE -- Structure of the coral reef in the Hamilton shale of Onondaga Valley. 1927 A.M. -- Syracuse University

BONHAM, LAWRENCE D. -- Structural geology of the Hoosick Falls area, New York-Vermont, in relation to the theory of Taconic overthrust. 1950 Ph. D. -- University of Chicago

BUEHLER, EDWARD J. -- The Tetracoralla of an Onondaga limestone coral reef. 1942 M.A. -- University of Buffalo

CAMPBELL, A. RICHARD -- Some ostracodes from the basal Ludlowville (Hamilton), Genesee County, New York. 1952 M.S. -- University of Rochester

CARLSTON, CHARLES W. -- Appalachian drainage and the highland border sediments of the Newark series. 1946 Ph. D. -- Columbia University

CARPENTER, CHARLES R. -- The Chemung epoch. 1880 B.S. -- Cornell University

CHADWICK, GEORGE H. -- Brachiopod fauna of the basal Port Ewen beds. 1907 M.S. -- University of Rochester

CHAMBERLAIN, JOHN -- The Vernon shale in central and western New York. 1948 M.S. -- University of Rochester

CHANCELLOR, ROBERT E. -- Nature and possible source beds of the fragments in the Deepkill Breccias near Pleasant Valley, New York. 1948 M.A. -- Columbia University

CHENOWETH, PHILLIP A. -- Statistical methods applied to Trentonian stratigraphy in New York. 1950 Ph. D. -- Columbia University

COLEY, TYROL B. -- The stratigraphic distribution and correlation of some Middle Devonian Ostracoda. M.S. (date unknown) -- Wayne University

CLARK, BURTON W. -- The Peridotite dikes of Onondaga County, N. Y. 1908 A.M. -- Syracuse University

COLLINS, GEORGE H. jr. -- The joint pattern on the limbs of a syncline of Paleozoic rocks infaulted and infolded in the Precambrian. 1953 M.A. -- Columbia University

COOPER, G. ARTHUR -- The Hamilton group of New York. 1929 Ph. D. -- Yale University

COLVILLE, ADDISON L. -- On the Hamilton group. 1886 B.S. -- Cornell University

CRADDOCK, J. CAMPBELL -- Preliminary report on structural and stratigraphic studies in the Kinderhook quadrangle, New York. 1953 M.A. -- Columbia University

CRAIG, LAWRENCE C. -- Lower Mohawkian stratigraphy of Central New York State. 1941 M.A. -- Columbia University

CSERNA, EUGENE -- A study of the rock fractures in the Cortlandt complex. 1950 M.A. -- Columbia University

CUSHING, HENRY P. -- Geology of the Thousand Island Region. 1909 Ph. D. -- Cornell University

DALLY, JESSE L. -- A study of joints in the Cortlandt complex. 1949 M.A. -- Columbia University

DUNKERLEY, ROBERT -- Styolites in the Vicinity of Syracuse, N. Y. 1950 M.S. -- Syracuse University

DWORNIK, EDWARD J. -- A study of the geology of the Lockport formation of western New York. 1948 M.A. -- University of Buffalo

DWORNIK, STEPHEN E. -- A study of the Bertie formation of western New York and Southern Ontario. 1951 M.A. -- University of Buffalo

DUNCAN, GEORGIANNA H. -- Geologic structure between the Catskills and Berkshires in the region of Hudson, N. Y. 1928 M.A. -- Cornell University

DURHAM, FORREST -- Some sporadic minor buckling of strata in south-central New York. 1947 M.S. -- Cornell University

EAKLE, ARTHUR S. -- The geology of Crown Point township, Essex County, N. Y. 1892 B.S. -- Cornell University

ELSTON, DONALD P. -- Geology of the Pool's Brook limestone of the Manlius Group. 1951 M.S. -- Syracuse University

FISHER, DONALD W. -- Precambrian and Lower Paleozoic geology of a portion of the Mohawk Valley, New York. 1948 M.A. -- University of Buffalo

FISHER, DONALD W. -- Lower Ordovician stratigraphy and paleontology of the Mohawk Valley. 1952 Ph. D. -- University of Rochester

FRIDLEY, HARRY M. -- Identification and correlation of erosion surfaces in south central New York. 1928 Ph. D. -- Cornell University

FRIEDMAN, GERALD M. -- A study of the emery deposits in the southeastern part of the Cortlandt complex. 1950 M.A. -- Columbia University

FURBUSH, MALCOLM -- The stratigraphy and structure of the northern half of the South Onondaga quadrangle, N. Y. 1952 M.S. -- Syracuse University

GANTNIER, ROBERT -- The Geology of the Chenango Forks, N. Y. Seven and one-half minute Quadrangle. 1951 M.S. -- Syracuse University

GILLETTE, TRACY -- Geology of the Clyde and Sodus Bay quadrangles, New York. 1934 M.S. -- University of Rochester

GILLETTE, TRACY -- The Clinton of New York State from Rochester to Clinton. 1937 Ph. D. -- Johns Hopkins University

GRAY, CARLYLE -- The geology of the Shawangunk mine and environs. 1947 M.A. -- Columbia University

GRISWOLD, RUSSELL E. -- Geology and Ground Water Resources of Wayne County, N. Y. 1949 M.S. -- Syracuse University

GROSSMAN, WILLIAM L. -- Geology of the Caledonia quadrangle, N. Y. 1938 M.S. -- University of Rochester

GROSSMAN, Wm. L. -- Stratigraphy of the Genessee Group of New York. 1944 Ph. D. -- Columbia University

GWYNNE, CHARLES S. -- A study of the structural features south of the Helderberg escarpment in the vicinity of Syracuse, New York. 1925 A.M. -- Syracuse University

HARD, EDWARD W. -- The depositional environment of the Upper Devonian bituminous shales in New York State. 1929 M.S. -- Cornell University

HARRINGTON, ROBERT B. -- The stratigraphy and structure of the southern part of the Manlius, N. Y. 7½-minute quadrangle. 1951 M.S. -- Syracuse University

HAWLEY, L. DAVID -- Shales along Lake Champlain (exact title and date not known) Ph. D. -- Columbia University

HEMINWAY, CAROLINE E. -- Devono-Carboniferous differentia. 1928 M. S. -- Cornell University

HERSHELMAN, WILLIAM L. -- A study of the physical properties of the Venango oil sands. 1938 M.S. -- Syracuse University

HOFFMAN, CARLYLE -- A geologic study of the Cobleskill formation of Western New York. 1949 M.A. -- University of Buffalo

HOLMES, HARVEY N. -- Geological column and dip of the strata in the vicinity of Syracuse. 1910 A.M. -- Syracuse University

HONESS, CHARLES W. -- Studies in the Upper Devonian - Lower Carboniferous strata of the Appalachian Sea. 1916 M.A. -- Cornell University

ISACHSEN YNGVAR W. -- Geology of the Rensselaer Falls quadrangle, New York. 1953 Ph. D. --Cornell University

JAFFE, GILBERT -- A field and laboratory investigation of the oil bearing Rhinestreet shale. 1950 M.A. -- University of Buffalo

JENSEN, DAVID E. -- Some aspects of sedimentation of Oriskany formation of west-central New York. 1932 M.S. -- University of Rochester

JOHNSEN, JOHN H. -- The Geology of the Oran, N. Y. quadrangle. 1948 M.S. -- Syracuse University

KAMMER, CHARLES -- A stratigraphic study of the Geneseo shale of western New York. 1950 M.A. -- University of Buffalo

KARLESKIND, LORENE C. -- The Ordovician of Sugar River, New York and vicinity. 1931 M.S. -- University of Rochester

KETTERER, WALTER PHILIP -- A study of the strata immediately underlying the Olney limestone in the vicinity of Syracuse, New York. 1940 M.S. -- Syracuse University

KLEPSER, HARRY JOHN -- A stratigraphic and paleontologic study of the Portage Group of Eighteen Mile Creek and vicinity. 1933 A.M. -- Syracuse University

KOPF, RUDOLPH. -- Paleontology of the Moscow formation in the Leicester quadrangle, New York. 1952 M.A. -- University of Buffalo

KREMER, LOIS A. -- Petrographic study of the Thorold-Oneida, New York. 1932 M.S. -- University of Rochester

LARSEN, LEONARD H. -- Lithology of the Cambro-Ordovician dolomite and its contact relations with the Hudson River series in Orange County, New York. 1953 M.A. -- Columbia University

LECOUNT, DOROTHY A. -- A study of the Inwood marble in the vicinity of Pleasantville, New York. 1947 M.A. -- Columbia University

LEMAR, HAROLD K. -- The geology and structure of the Thornton Oil Company's Lot 133, Alma township, Allegany, N. Y. 1949 M.S. -- Syracuse University

LIPPITT, LOUIS -- Statistical treatment of the Cobourg limestone, Trenton group in northern Lewis County and Jefferson County, N. Y. 1954 Ph. D. -- Columbia University

LOCKWOOD, WILLIAM N. -- The stratigraphy and paleontology of the White Medina sandstone. 1936 M.A. -- University of Buffalo

LOGIE, RUSSELL -- Stratigraphy of the Manlius limestone in N. Y. early 1930's M.A. -- Yale University

MARSHALL, HOLMES -- The Tully limestone on the east side of Cayuga lake. 1883 B.A. -- Cornell University

MARTENS, JAMES H. C. -- A study of the basic dikes of the Ithaca region. 1923 M.S. -- Cornell University

McCOURT, WALTER E. -- Geology of Wayne County, New York. 1904 A.B. -- Cornell University

MEGATHLIN, GERRARD R. -- Faulting in the Mohawk Valley. 1933 Ph. D. -- Cornell University

MENCHER, ELY -- The Catskill Facies in New York State. 1938 Ph. D. -- Massachusetts Institute of Technology

MEYERS, HAROLD G. -- The Genundewa limestone. 1937 M.S. -- Cornell University

MOOKER, MARJORIE M. -- Joints of the Ordovician sediments southwest of the Adirondacks. 1933 A.M. -- Syracuse University

MOORE, WAYNE E. -- Some foraminifera from the Tully limestone of central New York. 1948 M.S. -- Cornell University

MOZOLA, ANDREW JOHN -- Contributions on the origin of the Vernon shale. 1938 M.S. -- Syracuse University

MULTER, HAROLD GRAY -- Some structural and physical properties of the Richburg sand, Allegany County, New York. 1951 M.S. -- Syracuse University

NEEL, ROBERT -- Stratigraphy and glacial geology of the Portage quadrangle, New York. 1951 M.S. -- University of Rochester

NOVOTNY, ROBERT F. -- Structure and sedimentation of the Richburg sands in part of Wirt township, Allegany County, N. Y. 1952 M.S. -- Syracuse University

OLIVER, WILLIAM A. -- Coral beds of the middle Devonian (Hamilton) of Central New York. 1950 M.A. -- Cornell University

OLIVER, WILLIAM A. -- Stratigraphy of the Onondaga limestone in central New York. 1952 Ph. D. -- Cornell University

OXLEY, PHILIP -- Chazyan stratigraphy and bryozoan fauna west of the Champlain thrust, N. Y. and Vermont. 1950 Ph. D. -- Columbia University

OWENS, JAMES P. -- The Cowlesville marcasite. 1949 M.A. -- University of Buffalo

PARKER, JOHN M., III -- Regional systematic jointing in gently dipping sedimentary rocks. 1935 Ph. D. -- Cornell University

PAVLIDES, LOUIS -- The structure and stratigraphy of the limestone quarry at Verplanck, New York and vicinity. 1947 M.A. -- Columbia University

PAINE, THOMAS -- Coral zones of the Hamilton Group of western New York. 1939 M.S. -- University of Rochester

PEPPER, JAMES F. -- The effect of the taconic orogeny upon lateral deformations in the Hudson River region. 1934 Ph. D. -- Cornell University

PLOGER, LOUIS W. -- Crustal disturbances in the Cattaraugus Creek region. 1922 A.M. -- Syracuse University

PELSWICK, EUGENE M. -- Notes from the outcrops along the East shore of Cayuga lake. 1883 B.S. -- Cornell University

PROSSER, CHARLES S. -- The geology and comparative palaeontology of Brookfield, N. Y. 1883 B.S. -- Cornell University

PROSSER, CHARLES S. -- Astudy of the fossil faunas of the Middle and Upper Devonian along the Unadilla River, New York. 1886 M.S. -- Cornell University

PROSSER, CHARLES S. -- The classification and distribution of the Hamilton and Chemung series of central and eastern New York. 1907 Ph. D. -- Cornell University

PROUDY, WILLIAM F. -- Manlius limestone of Onondaga County. 1904 A.M. -- Syracuse University

PULLEN, MILTON WILLIAM -- Stromatoporoids from the Janesville limestone in the Syracuse region. 1940 M.S. -- Syracuse University

REMSON, IRWIN -- The structure and stratigraphy of the limestone quarry at Tompkins Cove, New York and vicinity. 1949 M.A. -- Columbia University

RICKARD, LAWRENCE V. -- The Middle Devonian Cherry Valley limestone of eastern New York. 1951 B.S. -- Cornell University

RICKARD, LAWRENCE V. -- Stratigraphy of the Upper Silurian Cobleskill, Bertie and Brayman formations of New York State. 1953 M.S. -- University of Rochester

RODGERS, JOHN -- Stratigraphy and structure in the upper Champlain Valley. 1937 M.S. -- Cornell University

ROSS, (MRS.) MARY H. -- Source and correlation of the Deepkill conglomerates. 1948 M.A. -- Cornell University

ROSS, MARY H. -- The tabulata of the Hamilton group (Middle Devonian of New York). 1951 Ph. D. -- Cornell University

ROWELL, ELEANOR MAE -- The structural geology of the limestones of the plateau front near Syracuse, N. Y. 1937 A.M. -- Syracuse University

SARLE, CLIFTON -- A new eurypterid fauna. 1903 M.S. -- University of Rochester

SASS, DANIEL -- Paleoecology and stratigraphy of the Genundewa limestone of western N. Y. 1951 M.S. -- University of Rochester

SCHNEIDER, P. F. -- Notes on the geology of the Onondaga Valley. 1893 A.M. -- Syracuse University

SCOBEY, WARREN BARRETT -- Origin of the "Heldersberg" limestones in the Syracuse area. 1940 A.M. -- Syracuse University

SIMMONS, BENJAMIN T. -- Geology of the Bristol gas field, New York. 1936 M.S. -- University of Rochester

SIMONDS, FREDERIC W. -- The geology of Ithaca, N. Y. 1875 B.S. -- Cornell University

SMITH, CHARLES E. -- The Genesee sub-stage: its characters and distribution. 1902 M.A. -- Cornell University

SMITH, MARGUERITE -- Queenston formation of western New York. 1938 M.S. -- University of Rochester

SMITH, MARVIN -- Ostracodes from Middle Devonian Ledyard, Wanakah, and Tichenor shales of western New York. 1952 M.S. -- University of Rochester

STEVENSON, ROBERT E. -- Stratigraphy and structural geology of central New York. 1949 Ph. D. -- Lehigh University

STEWART, GLEN WM. -- Subsurface conditions in and around Syracuse, N.Y. 1937 M.S. -- Syracuse University

STONE, DONALD S. -- Origin and significance of the breccias along the northwestern side of Lake Champlain. 1951 M.A. -- Cornell University

STONE, SOLON W. -- The Origin of the Manlius group of limestones in central New York. 1940 A.M. -- Syracuse University

STUDLEY, DUANE -- The Portage and Chemung groups of rocks. 1881 B.S. -- Cornell University

ST. CLAIR, DONALD W. -- The laboratory study of limestones with reference to the Silurian-Devonian contact in the Syracuse region. 1935 M.S. -- Syracuse University

SUTTON, ROBERT -- Stratigraphy and structure of the Batavia quadrangle, New York. 1950 M.S. -- University of Rochester

TESMER, IRVING H. -- Stratigraphy and paleontology of the Lower Canadaway of Chautauqua county, N. Y. 1948 M.A. -- University of Buffalo

VAN VLOTEN, ROGER -- A contribution to the statistical study of joints with application in the Cortlandt complex. 1950 M.A. -- Columbia University

VERWIEBE, WALTER A. -- The Devono-Carboniferous boundary rocks of Ohio, Pennsylvania and New York. 1918 Ph. D. -- Cornell University

WANLESS, H. R. -- Final Report on the Geology of the Rosendale region. 1920 Senior thesis -- Princeton University

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WEDOW, HELMUTH jr -- A study of the stratigraphy and sedimentation of the Genundewa limestone in western New York. 1939 M.A. -- University of Buffalo

WIESNET, DONALD RICHARD -- Study of the Ordovician sediments exposed along Deer River, New York. 1951 M.A. -- University of Buffalo

WILLIAMS, GEORGE Q. -- Petrography and stratigraphy of Portage group in the Honeoye quadrangle, New York. 1947 M.S. -- University of Rochester

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WINTRINGHAM, NEIL A. -- The geology of Dutchess County, New York. 1947 M.S. -- Cornell University

WRAY, IRENE -- The Onondaga limestone and its insoluble residues from sections of New York State. 1936 M.S. -- University of Rochester

GLACIAL GEOLOGY AND PHYSIOGRAPHY

ALLING, MERLE KOLB -- A study of the physiographic history of Allen's Creek at Corbett's Glen. 1924 M.S. -- University of Rochester

BAKER, ELIZABETH -- Tentative evaluation of some of the factors influencing topographic development in central New York State. 1930 M.S. -- Cornell University

BLAGBROUGH, JOHN -- The red clay deposits of Otisco Valley. 1951 M.S. -- Syracuse University

BONSTEEL, JAY A. -- A higher post-glacial level of Chautauqua lake. 1896 B.S. -- Cornell University

BRAINERD, A. E.(jt. author) -- Pleistocene deposits of a section of the Larger Cicero Swamp (Perry and Brainerd). 1912 M.S. -- Syracuse University

BRAINERD, WM. FRANCIS -- Dana glacial lake terrace and the great delta of Onondaga Valley. 1922 A.M. -- Syracuse University

CARLL, SAMUEL P. -- Some drainage changes about Cayuga Lake. 1895 B.A. -- Cornell University

CARLSTON, CHARLES W. -- Appalachian drainage and the highland border sediments of the Newark series. 1946 Ph. D. -- Columbia University

CARNEY, FRANK -- Pleistocene geology of the Moravia quadrangle. 1909 Ph. D. -- Cornell University

CASE, ERMINE C. -- The drumlin region of western New York together with some experiments on ice action. 1895 M.S. -- Cornell University

CHISNELL, THOMAS C. -- Recognition and interpretation of pre-glacial strand lines in the Cayuga basin. 1951 Ph. D. -- Cornell University

CUSHING, HENRY P. -- Notes on the geological history of Seneca and Cayuga lakes. 1882 B. Ph. -- Cornell University

CUTHBERT, F. LEICESTER -- A geologic study of Cattaraugus Creek and vicinity with special reference to Pleistocene sediments. 1937 M.A. -- University of Buffalo

DAVIS, ETHEL -- Glacial geology of the Palmyra and Pultneyville quadrangles, New York. 1941 M.S. -- University of Rochester

DOLLEN, BERNARD -- Pre-glacial drainage of the northeastern United States. 1931 M.S. -- University of Rochester

DOWNES, CHARLES S. -- Shore-lines of the southern Cayuga Lake Basin. 1896 B.S. -- Cornell University

DUNBAR, ELIZABETH -- Glacial Lake succession in the Genesee Valley. 1923 M.S. -- University of Rochester

EDWARDS, IRA -- Pleistocene geology of the Albion-Holly district. 1914 M.S. -- University of Rochester

ELDREDGE, FRANK E. -- Surficial geology of the vicinity of Syracuse. 1911 M.S. -- Syracuse University

EVANS, RICHARD H. -- Drainage modifications and the post-glacial changes in the course of Taughannock Creek. 1897 A.B. -- Cornell University

FARNHAM, NYE H. -- The history of the Chemung Valley near Elmira, New York. 1898 B.S. -- Cornell University

FILMER, EDWIN A. -- The glacial geology of the Binghamton, N. Y. quadrangle, U. S. Geological Survey. 1928 M.A. -- Cornell University

FOOTE, CHARLES W. -- Notes upon the geological history of Cayuga and Seneca Lakes; together with a few general remarks upon the glacial period. 1877 Ph. D. -- Cornell University

GIBSON, STANFORD J. -- Frost correlations in New York State. 1934 M. A. -- Cornell University

GILES, ALBERT WM. -- Eskers of western New York. 1910 M.S. -- University of Rochester

GOLDRICH, SAMUEL S. -- The mechanical composition of the till in the Syracuse region. 1930 A.M. -- Syracuse University

HOLMES, CHAUNCEY D. -- Special glacial features of the Cazenovia quadrangle. 1927 A.M. -- Syracuse University

HICK, FLORENCE -- Comparative lithological study of the materials in the drift of the Syracuse region. 1920 A.M. -- Syracuse University

JAMES, CAROLYN -- A boundary between the Hudson Valley and New England Provinces drawn from geomorphic differences. 1943 M.A. -- Columbia University

KAISER, RUSSELL F. -- The composition and origin of the glacial till in the Mexico and Kasoag quadrangles, N. Y. 1939 M.S. -- Syracuse University

KOCH, GUSTAVE HENRY -- The hydrology of the Onondaga drainage basin. 1932 A.M. -- Syracuse University

LANGEY, EDWARD J. -- Unconsolidated sediments in the Black River area of New York State. 1952 Ph. D. -- Syracuse University

LEROY, FRANK L. -- Outlet history of Peri-glacial Cayuga Lake. 1938 M.S. -- Cornell University

LIVINGSTON, ROBERT F. -- Origin of Cayuga Valley terraces. 1894 B.S. -- Cornell University

LOCKHEAD, WILLIAM -- Pre-glacial drainage of the Upper Cayuga Basin. 1895 M.S. -- Cornell University

MARTIN, JAMES O. -- A study of the drumlin area of New York State. 1903 M.A. -- Cornell University

MATSON, GEORGE C. -- A contribution to the study of the inter-glacial gorge problem. 1903 A.M. -- Cornell University

MILLER, DAVID W. -- Potential ground water storage capacity of the upper Pleistocene deposits in Kings County, N. Y. 1953 M.A. -- Columbia University

MINER, NEIL ALDEN -- The origin and history of Green and Round Lakes in Green Lake State Park at Fayetteville, N. Y. 1933 A.M. -- Syracuse University

MONNETT, VICTOR E. -- The glacial physiography of the Skaneateles Basin. 1922 Ph. D. -- Cornell University

NEEL, ROBERT -- Stratigraphy and glacial geology of the Portage quadrangle, New York. 1951 M.S. -- University of Rochester

NEWELL, JOHN GARDINER -- The geomorphic development of the Tug Hill Plateau. 1940 M.S. -- Syracuse University

PERRY, C. W. -- Pleistocene deposits of a section of the Larger Cicero Swamp. 1912 M.S. -- Syracuse University

REINECKE, LEOPOLD -- A contribution to the petrography of the Ithaca drift. 1909 A.M. -- Cornell University

RICE, H. J. -- Physiography of Cazenovia Valley. 1881 Ph. D. -- Syracuse University

RICH, JOHN L. -- Types of marginal glacial drainage in the Finger Lake Region. 1907 Ph. D. -- Cornell University

ROSS, WILLIAM A. -- The drift filling of the Wyoming Valley. 1898 B.S. -- Cornell University

SIMPSON, EUGENE S. -- Buried pre-glacial channels in the Albany-Schenectady area in New York. 1945 M.A. -- Columbia University

SUESS, IRMA L. -- Problem of post-glacial differential uplift. 1932 M.S. -- University of Rochester

SWEET, LOIS B. -- Rock gorges associated with the outlet of Cayuga Lake. 1934 M.S. -- Cornell University

WALTERS, ROBERT F. -- Glacial geology of Monroe County, N. Y. 1938 M.S. -- University of Rochester

WATSON, THOMAS L. -- Some higher levels in the post-glacial development of the Finger Lakes of New York State. 1897 Ph. D. -- Cornell University

WHITBECK, RAY H. -- Some influences of the glacier upon drainage, especially in the Genesee Valley. 1901 A.B. -- Cornell University

WOLD, JOHN S. -- Interglacial consequents of central New York. 1939 M.S. -- Cornell University

MINERALOGY

ALLEN, WALTER C. -- Mineralogy of the brick clays at Kingston, New York. 1947 M.A. -- Columbia University

ANDERSON, KEITH -- Copper mineralization near Oxbow, Jefferson County, New York. 1947 M.S. -- University of Rochester

BENZ, ROBERT -- Origin and occurrence of chert and other forms of silica in the limestones near Syracuse. 1952 M.S. -- Syracuse University

BISPHAM, ROBERT G. -- Minerals of Brook Hollow, New York. 1940 M.A. -- Columbia University

CARR, WILLIAM L. -- A study of the pebbles and heavy minerals of the Olean, Salamanca and Wolf Creek conglomerates of southwestern New York. 1947 M.S. -- Cornell University

DRESSNER, ELLIOTT F. -- Genesis of the Clifton mine magnetite deposit, De Grasse, St Lawrence County, New York. 1950 M.S. -- Cornell University

DZIMIAN, RAYMOND J. -- Application of the hydrothermal method to the synthesis of large beryllium oxide crystals. 1952 M.A. -- University of Buffalo

HOYT, VIRGINIA -- Heavy mineral studies of the New York Clinton. 1943 Ph. D. -- University of Rochester

INGHAM, ALBERT I. -- The zinc and lead deposits of Shawangunk Mountain, New York. 1939 M.S. -- Cornell University

JONES, JAMES R. -- A study of some insoluble residues from the Elmwood beds at Kimber Spring Ravine. 1948 M.S. -- Syracuse University

McNULTY, CHARLES -- Insoluble residues of Lower Ordovician limestone along the Black River, N. Y. 1948 M.S. -- Syracuse University

PIKE, STEWART J. -- Contributions on the origin and occurrence of the Little Falls or Herkimer Quartz "Diamonds." 1949 M.S. -- Syracuse University

PLATT, ROBERT M. -- Lead and zinc occurrence in the Lockport dolomite of New York State. 1949 M.S. -- University of Rochester

REED, CHARLES -- Insoluble residue studies of the Lockport dolomite in New York State. 1936 M.S. -- University of Rochester

ROEDDER, EDWIN W. -- Clinozoisite pseudomorphs after Scapolite from Hollburn, New York. 1947 M.A. -- Columbia University

SHAUB, BENJAMIN M. -- A unique feldspar deposit near DeKalb Junction, St Lawrence County, New York. 1928 M.S. -- Cornell University

STOW, MARCELLUS H. -- An occurrence of Oriskany sandstone with celestite cement. 1927 M.A. -- Cornell University

TENNISSEN, ANTHONY -- The distribution, occurrence and origin of the Gypsum in the Camillus formation of the Syracuse East quadrangle, New York. 1952 M.S. -- Syracuse University

THIBAULT, NEWMAN WM. -- Celestite and associated minerals from Geodes near Chittenango Falls, New York. 1934 A.M. -- Syracuse University

TYLER, HENRY J. -- Contribution of the petrology of the Thorold sandstone. 1940 M.S. -- Cornell University

WEIGLE, JAMES -- Effects of subnormal temperature on some physical characteristics of minerals: A preliminary investigation. 1948 M.S. -- Syracuse University

WEISER, JEANNE -- A method of dyeing as applied to certain plagioclase feldspars. 1945 M.S. -- Syracuse University

WRIGHT, JAMES C. -- Genesis of the iron ore deposits at Benson Mines, St Lawrence County, New York. 1949 M.S. -- Cornell University

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PUBLICATIONS OF THE NEW YORK STATE MUSEUM 1953

Bulletins:

Geology and mineral resources of the Oriskany (Rome) quadrangle -- Dale, Nelson C. N.Y.S. Mus. Bull. 345

Geology of the Saranac quadrangle -- A. F. Buddington N.Y.S. Mus. Bull. 346

Geology of the Utica quadrangle -- Marshall Kay, with a chapter on the Silurian by W. L. Grossman N.Y.S. Mus. Bull. 347

Circulars:

History, geology and future possibilities of gas and oil in New York State -- William Lynn Kreidler N.Y.S. Mus. Circ. 33

Conical and cylindrical structures in the Potsdam sandstone, Redwood, New York -- R. V. Dietrich N.Y.S. Mus. Circ. 34

The contact between the Manlius limestone and the Coeymans limestone in upper New York State -- George H. Davis III N.Y.S. Mus. Circ. 35

Age of the Brayman shale -- Donald W. Fisher and Lawrence V. Rickard N.Y.S. Mus. Circ. 36

Reports of Investigation:

The pyrite deposits of Jefferson and St Lawrence Counties, New York (Preliminary report) -- John James Prucha N.Y.S. Science Service R. I. No. 8

The white crystal dolomite deposit near Gouverneur, New York -- John James Prucha N.Y.S. Science Service R. I. No. 9

Maps:

The mineral resources of New York State -- John A. Graham (Scale 1:750,000)

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PRECAMBRIAN GEOLOGY

HAROLD L. ALLING, professor emeritus at the University of Rochester, is preparing a paper entitled "Study of an Adirondack Dike." His collection of 900 Adirondack thin sections is being catalogued and cross-indexed. Professor Alling hopes to make these available for future study by interested geologists.

PAUL BARTHOLOME, graduate student at Princeton University, spent last summer in a detailed study of the petrology of rocks in the northern half of the Lake Pleasant quadrangle. In connection with the garnet problem in general he also spent some time in a detailed restudy of the origin and relationships of the garnet zones in the Barton mine on Gore Mountain.

ROBERT BLOOMER, of St. Lawrence University, and associates are engaged in a detailed study of the Canton phacolith. This work includes a map on a base of aerial photographs on a scale of about 1 inch equals 1000 feet, petrofabric plots, precise mineral determinations, mineral zones, possible stratigraphic units and structure analyses.

A. F. BUDDINGTON and B. F. LEONARD, of the U. S. Geological Survey, are preparing a manuscript, "Geology of the St. Lawrence County Magnetite District," for publication as a Professional Paper.

Two other reports, "Correlation of Geology and Magnetics for Northwest Adirondacks, New York," by BUDDINGTON, BALSLEY, FAHEY and VLISIDES; and "Titaniferous Magnetite as a Geologic Thermom-

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eter," by BUDDINGTON, FAHEY and VLISIDES, are in preparation for the U. S. Geological Survey.

R. V. DIETRICH, of Virginia Polytechnic Institute, spent two weeks continuing his study of the Alexandria batholith near Chippewa Bay on the St. Lawrence River.

A. E. J. ENGEL, of the U. S. Geological Survey, and CELESTE G. ENGEL have completed laboratory studies of (1) the geochemistry of the marbles of the Grenville series in the northwest Adirondacks, and (2) variations in the properties of a Grenville migmatite and of the component phases biotite, garnet and feldspar as a function of degree of metamorphism. The Engels have submitted for publication as a U. S. Geological Survey Professional Paper a manuscript entitled "Precambrian Geology and Talc Deposits of the Balmat-Edwards District, New York." A. E. J. Engel is also preparing an areal geologic map and a report on the Edwards 7½-minute quadrangle for publication in the U. S. Geological Survey Quadrangle Map series. Engel and JOHN S. BROWN of the St. Joseph Lead Co. are collaborating on a revision of stratigraphy and structure in the Edwards-Balmat area of St. Lawrence County which is planned for publication during the coming year.

J. L. GILLSON, chief geologist for E. I. duPont de Nemours & Co., presented a paper entitled "Genesis of the Titaniferous Magnetites and Associated Rocks of the Lake Sanford District, New York" at the annual fall meeting of the A. I. M. E., Industrial Minerals Division, held at Lake Placid in October.

HENRY HEALY, student at New York University, is working on the structure of the Byram gneiss complex in western Rockland County. Special emphasis is being placed on the relation of igneous and metamorphic structures to topography in the Hillburn-Sloatsburg area.

ARTHUR NELSON, of the U. S. Geological Survey, began mapping the Wilmurt quadrangle.

A. WILLIAMS POSTEL, of the U. S. Geological Survey, completed mapping the Precambrian rocks of the Malone quadrangle and began work in the Mooers quadrangle.

JOHN JAMES PRUCHA, of the State Geological Survey, spent four months mapping in the Brewster and Croton Falls 7½-minute quadrangles in southeastern New York. About a month of this time was spent working on the Precambrian gneisses of the Brewster quadrangle. The rest of the time was spent on the younger metamorphic series in the Croton Falls quadrangle. He was assisted in the field by JOHN A. GRAHAM and ROBERT M. SNEIDER. A report entitled "Geology of the Brewster Magnetite District" has been submitted by Prucha for publication by the New York State Museum and Science Service. Compilation of a Precambrian geologic map of the Adirondacks is progressing. Map units have been selected and the actual synthesis of a 1:250,000 scale map is well along.

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MATT WALTON, of Yale University, completed the geologic mapping of the Port Henry quadrangle and began working in the Elizabethtown quadrangle for the State Geologic Survey. Geologic maps and accompanying texts for the Paradox Lake and Ticonderoga quadrangles are now being prepared.

GENERAL GEOLOGY, INCLUDING PALEONTOLOGY AND STRATIGRAPHY

SHERMAN T. ALLENSON, of Syracuse University, is mapping the bedrock geology of the southern half of the Camillus quadrangle for his master's thesis.

HAROLD L. ALLING, professor emeritus of the University of Rochester, has two papers in preparation, "Petrology of the New York Salina" and "Some Relationships between Characteristics of Sedimentary Rocks."

CHRISTINA LOCHMAN BALK, of the New Mexico Bureau of Mines and Mineral Resources, is nearing completion of a paper entitled "The *Elliptocephala asaphoides* fauna of *Cambridge and Hoosick* quadrangles, New York."

HANS J. BEHM, student at New York University, published his thesis, "The Petrology of the Serpentinite of Richmond County (Staten Island), New York" in the Proceedings of Staten Island Institute of Arts and Sciences, 1954.

JEAN BERDAN, of the U. S. Geological Survey, spent two weeks during the last summer collecting ostracods from Ordovician, Silurian and Devonian, and corals from the Ordovician in New York State. She is continuing a study of the ostracods from the Helderberg group, and a manuscript on the brachiopods and ostracods of the Manlius and Cobleskill limestones is nearing completion. This paper is designed as a dissertation for her Doctorate at Yale. Final plans for publishing it have not yet been completed.

RICHARD BOARDMAN, of the U. S. Geological Survey, is continuing work on bryozoa which he had previously collected from the Hamilton, Helderberg, and Onondaga groups. Boardman plans to make additional collections during the summer of 1955.

GEORGE CARLYLE, graduate student at Miami University (Ohio), is completing a master's thesis on the "Metasomatism of Some Basic Intrusions Southeast of Bedford, New York."

ANDREW DOUGLAS, of New York University, has in preparation, a master's thesis "Geologic Map and the Detailed Stratigraphic and Structural Geology of the Rosendale Area."

DONALD W. FISHER, of the New York State Geological Survey, began preliminary mapping of the bedrock geology in the Plattsburgh and Rouses Point 15-minute quadrangles. Formulation of an advisory committee for the Paleozoic portion of the new State Geologic Map has been one step forward toward the new map. The committee consists of the following:

G. ARTHUR COOPER - U. S. National Museum
J. EDWARD HOFFMEISTER (or proxy) - University of Rochester
MARSHALL KAY - Columbia University
JAMES PEPPER - U. S. Geological Survey
JOHN RODGERS - Yale University
A. SCOTT WARTHIN - Vassar College
JOHN W. WELLS - Cornell University
DONALD W. FISHER)
JOHN G. BROUGHTON) (ex officio) N. Y. State Geologic Survey

SEYMOUR HOROWITZ, of Syracuse University, has nearly completed his study of the bedrock geology of the southwestern quarter of the Syracuse East quadrangle. This will be submitted as a master's thesis.

WALLACE HOWE, of Syracuse University, has mapped in detail an area southwest of Rossie in the Hammond quadrangle, St. Lawrence County. This work is for the master's degree.

CECIL H. KINDLE and SEYMOUR H. EIDMAN, of City College of New York, have published the "Fauna of the Kanouse sandstone at Highland Mills, New York" in the January 1955 issue of the Journal of Paleontology.

ELEANORA BLISS KNOPF, of Stanford University, has had published "Preliminary results of a megascopic fabric analysis of the area around Stissing Mountain, Dutchess County, New York." Her work on the Paleozoic rocks of Dutchess County is still in progress.

PAUL D. KRYNINE, of Pennsylvania State College, is carrying on some microscopic study of the Potsdam sandstone from the type locality.

BERNARD O. LANE, of Brown University, has completed field work on the *Meristella* - coral zone in the Hamilton group of eastern New York. This is to constitute his master's thesis.

EDWARD LASKOWSKI, of Rensselaer Polytechnic Institute, has in progress a study of the Esopus, Schoharie and Carlisle Center formations in eastern New York. This is primarily a petrographic and sedimentary study for a master's thesis.

WILLIAM A. OLIVER, of Brown University, continued his paleontologic and stratigraphic investigation of the Onondaga limestone. A paper on Onondaga reefs has been submitted for publication as a New York State Museum Circular. This work was supported by the State Survey.

As a part of the work of the Fuels Branch, U. S. Geological Survey, geologic mapping has been carried on under the direction of

JAMES F. PEPPER. This has resulted in the following maps and reports which are currently being processed for publication:

> (Quadrangle Map series) "Bedrock geology of the Eden quadrangle" by DeWitt and Colton;
>
> (Circular series) "The occurrence of barite in Hanover shale in upper Devonian" by Pepper;
>
> Oil and Gas Map "Stratigraphy of the upper Devonian West Falls formation in west and west-central New York" by Pepper and DeWitt.

Field mapping has also been completed of the Bath 15-minute quadrangle and work is under way on the Woodhull 15-minute, the Attica 7½-minute, and the Geneseo 7½-minute quadrangle. GEORGE COLTON is in charge of the immediate field work and will continue with these studies in 1955.

Under the direction of WALLACE DEWITT, JR., of the U. S. Geological Survey, G. W. COLTON and assistants measured a number of sections by plane table in the rocks between the base of the Middlesex shale and the base of the Rhinestreet shale in the area between Lake Erie and Seneca Lake. Similar work is planned in the western part of the Finger Lakes District.

JAMES PRICE, of Cornell University, has been working near Austerlitz on the structure of an outlier of the Rensselaer graywacke. This is to be his master's thesis.

LAWRENCE V. RICKARD, of Cornell University, is completing his Ph.D. thesis on the Cayugan and Helderbergian limestones of central and eastern New York. The stratigraphy, paleontology, paleoecology and correlation are to be discussed. Present information indicates that the Manlius formation (and Rondout?) should be included within the Lower Devonian Helderbergian stage. The Silurian-Devonian boundary appears to be stratigraphically lower than previously believed. This work has been supported by the State Survey.

ROBERT A. SANDERS, of Syracuse University, has nearly completed the field work for his master's thesis problem, on the "Stratigraphy and Structure of the Olney limestone of central New York."

PETER SCIAKY, of New York University, has in progress a master's thesis "Structural Geology of the Rosendale area."

DAVID M. SCOTFORD, of Miami University (Ohio), is completing his studies of the structure and petrology of the Poundridge area in Westchester County.

ROBERT M. SNEIDER, graduate student at the University of Wisconsin, mapped in considerable detail the Croton Falls mafic complex in southeastern New York. Laboratory work correlative to this study is being completed at the University of Wisconsin. The field work was supported by the State Survey.

PARK STRUTHERS is mapping the bedrock in the northern half of the Cazenovia quadrangle, Madison County, for submission as a Master's thesis.

LEWIS STOVER, of the University of Rochester, is continuing his paleontologic studies of the Moscow shale in western and central New York. This work was supported by a N. Y. S. Science Honorarium.

ROBERT G. SUTTON, of the University of Rochester, has near completion his Ph.D. thesis on the "Stratigraphy of the Naples Group in New York." This work was partially supported by a N. Y. S. Science Service Honorarium.

IRVING TESMER, of the University of New Hampshire, has in preparation a manuscript on the "Stratigraphy and Paleontology of the Westfield, Dunkirk and Cherry Creek quadrangles, New York." This work has been supported by the State Survey and will be published as a N. Y. S. Museum bulletin. Tesmer is also making a study of well samples from a number of wells in Chautauqua County.

A. SCOTT WARTHIN, of Vassar College, continued geologic mapping in the Poughkeepsie quadrangle and started work in the Schunemunk quadrangle. The work in the Poughkeepsie quadrangle has been supported by the State Survey.

HARRY B. WHITTINGTON, of Harvard University, is currently engaged in a revision of the trilobite family Odontopleuridae, which will include redescription of type specimens from the Ordovician and Devonian of New York.

DONALD WIESNET, of the U. S. Geological Survey, spent 6 weeks mapping the Paleozoic geology of the Mooers quadrangle. He had previously completed mapping the Paleozoic geology in the Malone and Chateaugay quadrangles.

GLACIAL GEOLOGY

CHARLES S. DENNY, of the U. S. Geological Survey, and W. L. LYFORD, of the Soil Conservation Service, are collaborating in the preparation of a report for publication in the Professional Papers series on the "Surficial Geology and Soils of the Elmira-Williamsport Region of New York and Pennsylvania." The map, on a scale of 1:250,000, will cover most of Chemung, Tioga and Schuyler counties, the southern part of Tompkins and the eastern part of Steuben County.

ROBERT LAFLEUR, of Rensselaer Polytechnic Institute, has been investigating the Pleistocene stratigraphy in Rensselaer County, particularly the environment of fluvial sands and gravels.

During the 1954 field season work continued on the Pleistocene geology of the St. Lawrence lowland under the direction of PAUL MAC CLINTOCK, of Princeton University, Temporary Geologist of the New York State Geological Survey. D. P. STEWART mapped the western part of the lowland from Ogdensburg to Lake Ontario while MacClintock mapped the Gouverneur-Ogdensburg and Chateaugay quadrangles. Contact was established with the work of NELSON GADD of the Canadian Geological Survey who was mapping the Pleistocene geology of the St. Lawrence Valley and Quebec.

ROBERT OLDALE, of Cornell University, is investigating the glacial tills of the Stockbridge Valley in Oneida and Madison counties.

FRED SCHLOSKY, of Syracuse University, is mapping the surficial deposits of the northern half of the Manlius quadrangle, Onondaga County. This will be submitted for a master's thesis.

ECONOMIC GEOLOGY (EXCLUSIVE OF PRECAMBRIAN)

Investigations of ground-water resources in upstate New York were continued in 1954 by the U. S. Geological Survey in cooperation with the New York Water Power and Control Commission. Ground-water studies by the U. S. Geological Survey were also made on Long Island under cooperative programs with the Commission and county agencies.

The state-federal program in upstate New York is under the immediate supervision of ERWIN ASSELSTINE. The over-all main purpose of this program is the appraisal eventually of ground-water resources in all the counties, so that such resources can be developed most efficiently and utilized to the State's best advantage. This purpose is accomplished largely by county studies, which include: (1) generalized mapping of the geological formations, especially the water-bearing formations, and (2) collecting data on wells and springs as the factual basis for estimating the productivity of the formations.

In 1954, field work consisted of the collection of additional geologic and hydrologic data for adequate coverage in Ontario County, geologic mapping in Chemung County, and the collection of additional well data in Oneida County. Some preliminary data on the quality of ground water were collected also in the Syracuse area in Onondaga County. Two areal reports were published by the State in 1954; namely, "The ground-water resources of Bronx, New York, and Richmond Counties," and "The ground-water resources of Washington County." Three areal reports were essentially completed this year for publication in 1955; namely, "The ground-water resources of Greene County," "The ground-water resources of Putnam County," and "Records of selected logs and wells in Westchester County."

By the end of 1954, 13 reports have been published by the State and two reports by the U. S. Geological Survey. The results of investigations of ground-water resources in 18 counties are included in these 15 reports. In addition, water-level data and associated information have been published by the Geological Survey in an annual series of water-supply papers. Work was nearly completed, in progress, or started in 13 other counties. No or very little work on a county basis has been done in 27 of the 58 counties in upstate New York.

Field work on New York State limestones was continued during the past year by the New York State College of Ceramics and the New York State Geological Survey. Work of the State Geological Survey was limited to Jefferson, St. Lawrence and Herkimer counties. JAMES R. DUNN, of Rensselaer Polytechnic Institute, was employed as the geologist-in-charge of the limestone project for the Survey. He completed field work on the limestones of Herkimer County north of the Hudson River. He was assisted in the field by JOHN OSTROM. JOHN H. JOHNSEN, of Vassar College, completed the mapping of St. Lawrence County which was started in 1953 by the late RALPH DIGMAN. The remainder of the 1954 field season was spent in mapping Jefferson County from the Jefferson-Lewis county line to near Watertown. He was assisted in the field by HAROLD HERZOG. Johnsen assumed the responsibility of writing the text for the report of limestone resources of Albany County which had been begun by Ralph Digman.

The contribution of the College of Ceramics to the statewide survey was of a similar nature to past years. In the winter months previously collected limestone samples were processed, tested and analyzed. Chemical petrographic, spectrographic and thermal analyses were made. Physical properties including absorption, specific gravity, soundness, grindability and microscopic texture were determined. Only one sampling crew was in the field during 1954. This was under the direction of V. A. DICKENS assisted by PAUL GOODRIDGE and JAMES TITLAR. During the 1954 field season slightly more than 700 feet of stone was cored and recovered. Four 100-foot holes were drilled in the Ogdensburg formation along the St. Lawrence River and two 150-foot holes were drilled in the Trenton and Black River formations near Watertown. Forty samples of Ogdensburg and Black River rock were brought to Alfred for testing. This season for the first time a core splitter was used and the split core filed in a core library at Alfred.

CHARLES R. FETTKE completed a report showing structure contours on the top of the Oriskany formation in northern Pennsylvania and the southernmost two tiers of quadrangles in western and southern New York. The maps, on a scale of 1:250,000, have been published with a text by the Pennsylvania Geological Survey. A preliminary report of the occurrences of salt in the Salina formation is nearly completed. The maps, which include part of southern New York, will show the total thickness of salt beds and the depth of salt beds below sea level. Also sponsored by the Pennsylvania Geological Survey is a geological cross section of Fettke's based on well sample records across the northern part of Appalachian Basin from the Findlay Arch in northwestern Ohio across northern Ohio, northern Pennsylvania, and southern New York to the Adirondack Arch in east central New York.

JOHN A. GRAHAM, of the State Geological Survey, is compiling a report on the "Mining and Quarry Industries of New York State, 1950-1951."

C. A. HARTNAGEL, retired State Geologist, and WILBUR H. YOUNG, JR., of the Empire Gas and Fuel Co., are completing their report on the "New York Oil Fields and the Progress in Secondary Recovery."

WILLIAM LYNN KREIDLER, of the New York State Geological Survey, has completed a report for the Interstate Oil Compact Commission on the possibilities for the underground storage of liquid petroleum and its products in the states of the Eastern Seaboard. The section of the report dealing with New York was completed by JAMES WIGGINS, of the Survey's Wellsville office, assisted by NEWTON CHUTE, of Syracuse University and ROBERT DIETRICH, of Suburban Propane Gas Corp. Wiggins is also making a sample study of the E. C. Kesselring well which is located in Chemung County and is the deepest cable-tool hole drilled anywhere todate.

THOMAS MURPHY, of the U. S. Geological Survey, made a brief examination of a section of the Potsdam sandstone in New York as part of his nation-wide study of high purity silica resources. The State Geological Survey cooperated with the U. S. Geological Survey and the U. S. Bureau of Mines in the review and appraisal of existing data on the geology and mineral resources of the New York-New England region for NENYIAC. NED NELSON is in charge of the U. S. Geological Survey Mineral Resources and L.W. CURRIER is responsible for the report on the status of geologic mapping. The work is planned to be finished early in 1955.

VINCENT H. ROBERTSON, of New York University, is engaged in a study of the geology of the road building material of the New York Thruway.

The U. S. Bureau of Mines put down three additional drill holes on the Shawangunk Mine zinc-lead deposits near Wurtsboro to probe for an extension of the lower ore shoot discovered by the Bureau of Mines in 1948-49. The data obtained from core drilling will be published in a forthcoming report of investigation.

NIKOS THOMAIDIS has completed the drafting for the first (of 5) section of a 1:250,000 scale dry hole map for the state. The compilation for the map has been carried on by Kreidler and Wiggins. Kreidler has almost completed a map showing the extent of salt in New York. This will include the limits of the salt and contours on the top of the salt zone. A generalized isopadious map, cross sections and a short text will complete this investigation.

JOSEPH WORTHINGTON, of Columbia University, carried out a test project of geochemical exploration in the Shawangunk mine area near Wurtsboro. He investigated the sensitivity and accuracy of the dithyzone method in the search for zinc, lead and copper.

GEOPHYSICS

MAURICE EWING, of Columbia University, Lamont Geological Observatory, reports that some refraction profiles have been made in the Hudson River and others near Hyde Park. Laboratory velocity measurements on metamorphic rocks from Dutchess and Ulster counties are in progress.

The U. S. Geological Survey Geophysics branch has published or has in present progress aeromagnetic maps of the Oswegatchie quadrangle, Benson Mines area, Cranberry Lake quadrangle, and Stark, Childwold and part of the Russell quadrangles. Aeromagnetic contour maps of seventeen additional quadrangles are being prepared for publication in the Geophysical Map series.

SUPPLEMENTAL LIST OF THESES ON N. Y. STATE GEOLOGY

BENSON, A. R., The physiography of New York State 1934. M. S. -- Union College

BYE, DORIS L. -- Cyrtospirifer disjuctus species in Pennsylvania and southwestern New York. 1947 M. S. -- Pennsylvania State University

DURHAM, FORREST, The geomorphology of the Tioughnioga River of Central New York. 1954 Ph.D. -- Syracuse University

GILG, JOSEPH, Stratigraphy and structure of the Skaneateles Formation in Onondaga County. 1954 M. S. -- Syracuse University

JOHNSON, ROBERT (exact title unknown), deals with paleontology near Cortland, New York. 1950. -- Syracuse University

LA GRANGE, JOHN H., Stratigraphy and structure of the Jamesville limestone in Central New York. 1954 M. S. -- Syracuse University

LEUTZE, WILLARD P., Stratigraphy and paleontology of the Camillus and Syracuse Formations in Onondaga County. 1954 M. S. -- Syracuse University

MACK, FRED - Lithology and sedimentology of Chaumont Formation in Black River Valley. 1950 M. S. -- Syracuse University

MARKS, MILTON, Petrology of some sand and gravel deposits near Syracuse, New York. 1954 M. S. -- Syracuse University

METZ, CLYDE T. - Nature and distribution of faunas in well cores from the Bradford oil field. 1952 M. S. -- Pennsylvania State University

O'CONNELL, DANIEL T. - Pleistocene ice movement in New York City. M. S. 1926, Columbia University. Review of the geology of the eastern part of Bronx County, New York, 1932. Ph.D. -- New York University

RUSSELL, EDMUND L., Jr. - Stratigraphy and intraformational structures from well cores of the upper Devonian of the Bradford oil field. 1951 M. S. -- Pennsylvania State University

STEWART, DAVID P. - Surface geology and Pleistocene history of the Watertown and Sackets Harbor quadrangles, New York. 1954 Ph.D. -- Syracuse University

TESMER, IRVING - Stratigraphy and paleontology of the Cherry Creek quadrangle. 1954 Ph.D. -- Syracuse University

VAUGHAN, HENRY, The Brainard Outlier, 1934. -- Union College

WILSON, T. Y., The Rensselaer Grit Problem, 1932. -- Union College

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GEOLOGICAL RESEARCH IN NEW YORK STATE

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INTRODUCTION

The format of this seventh edition of the annual news letter compiled as a service by the Geological Survey of the N. Y. State Museum and Science Service is essentially as in past years. Many projects of eventual interest to economic geologists are reported under other headings within the news letter. Interested readers are directed there for news of such research problems. We have included a list of publications, not specifically referred to in the body of the letter, which may not have come to the attention of all. Theses are listed which have not previously been called to our notice.

It is worth repeating that the value of this compilation is in direct ratio to the degree of cooperation which we receive from our mailing list.

PRECAMBRIAN GEOLOGY

J. R. BALSLEY and A. F. BUDDINGTON, of the U. S. G. S., continued preparation of a manuscript on the oxide minerals and geology of the northwest Adirondacks and their correlation with magnetic data. The compilation of the magnetic survey and preparation of the accompanying geologic maps for about twenty quadrangles is essentially complete, and it is expected that two or three publications each covering two or three quadrangles will be released during 1956.

GEOLOGY LIBRARY

PAUL BARTHOLOME, graduate student at Princeton University, completed a field study of the garnet deposits at Gore Mountain and other related garnet concentrations. He also completed a field study of the gaboro-anorthosite gneiss sheet in the north half of the Lake Pleasant quadrangle. A completed report on these studies, which in part were supported by a State Museum and Science Service honorarium, is expected to be finished by spring 1956.

A. F. BUDDINGTON, of Princeton University and the U. S. G. S., spent two weeks in the field collecting 65 oriented samples of Adirondack rocks in connection with a study of the orientation of the magnetic azimuth of their remanent magnetism. BUDDINGTON, J. FAHEY, A. VLISIDIS published a paper entitled "Thermometric and Petrogenetic Significance of Titaniferous Magnetite" in the American Journal of Science, September 1955, pp. 497-532. This paper was based on work by the U. S. G. S. in the Adirondacks.

A. F. BUDDINGTON and B. F. LEONARD, of the U. S. G. S., are completing a revision of their report, "Geology and Ore Deposits of the St. Lawrence County Magnetite District." Summaries of the geology of several magnetite deposits, of the entire group of deposits, and of the anomalies found by airborne magnetometer have appeared in publications and open-file reports of the U. S. G. S. During 1955 the following publications were distributed:

1. BALSLEY, J. R., BUDDINGTON, A. F., et. al., 1954, Total aeromagnetic intensity and geologic map of Stark, Childwold, and part of Russell quadrangles, New York (aeromagnetic survey by J. R. BALSLEY, M. E. HILL and H. E. HAWKES; geology by A. F. BUDDINGTON and B. F. LEONARD): U. S. G. S. Geophysical Investigations Map GP 117.

2. ________________________________, 1954, Aeromagnetic survey and geologic map of the Cranberry Lake quadrangle, New York (aeromagnetic survey by J. R. BALSLEY, M. E. HILL and H. E. HAWKES; geology by A. F. BUDDINGTON and B. F. LEONARD): U. S. G. S. Geophysical Investigations Map GP 118.

A. E. J. ENGEL and CELESTE G. ENGEL, of the U. S. G. S. and California Institute of Technology, are completing a paper which discusses in detail "the variations in the properties of the major Adirondack paragneiss, and its constituent minerals biotite, garnet and feldspar as a function of kind and degree of metamorphism." A. E. J. ENGEL'S U. S. G. S. professional paper on "The Precambrian Geology and Talc Deposits of the Edwards-Balmat District" is now in final editing before press. A. E. J. ENGEL and JOHN S. BROWN have submitted to the G. S. A. for publication a paper entitled, "Revision of Stratigraphy and Structural Features in the Grenville Series, Edwards-Balmat District, Northwest Adirondacks, N. Y.".

HENRY G. HEALY, graduate student at New York University is working on a masters thesis on the "Geologic Structure of the Byram Gneiss Along the New York State Thruway in Rockland and Orange Counties." "It is a study of the foliation and jointing, as well as the gross structural features of the area, especially as related to one another and the influence in controlling the drainage pattern.

A. E. NELSON and W. L. MCINTOSH, of the U. S. G. S., continued mapping the geology of the Wilmurt quadrangle. This work started during the 1954 field season. The mapping is about half completed.

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A. WILLIAMS POSTEL, of the U. S. G. S., spent six weeks mapping the geology of the Nicholville quadrangle, which is now about 70% completed.

JOHN J. PRUCHA, of the State Geological Survey, completed mapping the bedrock geology of the Croton Falls $7\frac{1}{2}$-minute sheet, which includes a considerable area of Precambrian gneisses of the Hudson Highlands, Seven distinct map units have been separated out of the Highlands gneiss complex. Compilation of a Precambrian geologic map of the Adirondacks is progressing.

MARY C. REED, of the University of Rochester, is making a detailed petrographic study of the gabbro dike which cuts the magnetic anomaly at Everton.

SIMON SHAFFEL, graduate student in geology at Rutgers University, is continuing his studies of the structural petrology of the rocks in the vicinity of Breakneck Ridge in the Hudson Highlands.

ROBERT W. SCHNABEL, graduate student at the University of Buffalo, completed a master's thesis entitled, "Petrographic Study of the Rocks Exposed Along Moose River Between Lyons Falls and Fowlersville, N. Y.".

R. BRUCE THOMPSON spent the summer of 1955 in geologic mapping of the Stony Creek quadrangle in the southeastern Adirondacks, under the auspices of the U. S. G. S. This early work was concentrated on the southern half of the quadrangle which is much more accessible than the northern half. The emphasis of the work has been on the petrology and structural geology of the area. The problem is to be used as a Ph.D. dissertation at Bryn Mawr College, and present plans are to continue work in the area for two more field seasons.

S. F. THOUMSIN, of the University of Pennsylvania, is continuing his investigation of the opaque mineral associates and ores of Adirondack magnetite deposits.

JAMES VILLAR and NICK THEMLEY, of Michigan State University, did detailed mapping of the joints, foliation and faults within the Benson Mines open pit for Jones & Laughlin Steel Corporation. The purpose of this mapping was primarily to gather data which could be used to improve blasting techniques, and aid in mining generally, but their maps will also influence interpretations of structure and general geology of the mine. Their data indicate that the strike of the foliation was a major control for joint planes, but the planes seem to be fairly independent of the dip of the foliation.

MATT S. WALTON, of Yale University, continued his mapping in the Elizabethtown quadrangle for the State Geological Survey. This quadrangle is now essentially complete except for the principal anorthosite area. The Paradox Lake and Ticonderoga quadrangles geologic maps are completed and preliminary reports are in progress.

GENERAL GEOLOGY, INCLUDING PALEONTOLOGY AND STRATIGRAPHY

ANDREW ANDERSEN, a graduate student at the University of Buffalo, has in preparation a master's thesis on the geology of the gypsum deposits of Upper Camillus age.

CHRISTINA LOCHMAN BALK, of the New Mexico Bureau of Mines and Mineral Resources, has submitted her paper on the *Elliptocephala asaphoides* fauna of the Cambridge, N. Y. area to the G. S. A.

HARLAN P. BANKS and students of the botany department at Cornell University are continuing their studies on Devonian plants.

HANS BEHM, of New York University, is working on the brackish water fauna of Staten Island.

JEAN BERDAN, of the U. S. G. S., has nearly completed her study of Brachiopoda and Ostracoda from the Manlius and Cobleskill limestones of N. Y.

RICHARD BOARDMANN, of the U. S. G. S., continued his studies on Middle Devonian bryozoa.

EDWARD J. BUEHLER, of the University of Buffalo, has been mapping the 7½-minute Angola, Eden, and Hamburg quadrangles.

GEORGE COLTON, of the U. S. G. S., is in charge of field work on the stratigraphy of the Dunkirk shale and related strata in western N. Y. Geologic mapping is continuing in the Watkins Glen, Ithaca, Genoa, and Waverly 15-minute quadrangles. Additional work was done on the Reading Center, Leicester, and Geneseo quadrangles.

JAMES DEBRUIN, of Syracuse University, is mapping the geology of the southern half of the Syracuse West (7½') quadrangle for his master's thesis.

JAMES R. DUNN, of Rensselaer Polytechnic Institute, geologist-in-charge of the limestone survey, sponsored by the State Geological Survey, has, with JOHN H. JOHNSEN, of Vassar College, completed the map of limestones of Jefferson County. Dunn is in the process of preparing a report on the limestones of Herkimer County, the field work for which was completed the preceding year.

G. M. EHLERS and JEAN WRIGHT, of the University of Michigan, have prepared a paper on the type species of *Spinocyrtia fredericks*, which includes an analysis of a common N. Y. State Devonian spiriferid, *Spinocyrtia granulosa*. This article is to appear in the Contributions of the Museum of Paleontology of the University of Michigan.

DONALD W. FISHER, of the N. Y. Geological Survey, has continued bedrock mapping in the 15-minute Plattsburgh and Rouses Point quadrangles. Some time was spent assembling field data toward the preparation of a "Guide to the Geology of the Niagara Frontier." Work on the tentaculitids progresses. In cooperation with LAWRENCE V. RICKARD, of St. Lawrence University, field work was begun on the Clinton (Middle Silurian) of east-central N. Y.

RICHARD GOODMAN, of Cornell University, wrote a senior thesis on petrographic and textural studies of the Manhasset formation of Long Island, N. Y.

ROBERT C. GREENE, of Cornell University, wrote a senior thesis on the geology of an anticlinal body of Fordham gneiss between Ridgefield, Conn. and Katonah, N. Y.

The contact between the Fordham gneiss and Inwood marble was mapped and structural details noted. Some petrographic work was done.

WILBERT H. HASS, of the U. S. G. S., is continuing field and office work on conodonts from the Upper Devonian in western N. Y.

JOHN H. JOHNSEN, of Vassar College, completed the report on the limestones of Albany County.

DAREL W. KADLEC, of Cornell University, wrote a senior thesis entitled, "Restudy of Ithaca Dikes."

EDWARD A. LASKOWSKI, of Rensselaer Polytechnic Institute, has studied the sedimentary petrology of the Esopus, Carlisle Center, and Schoharie formations in eastern N. Y. Attendant with this was a restudy of the controversial fossil, *Taonurus*. Field and laboratory study reveal *Taonurus* to have been a Devonian kelp. This study, for a master's degree, was supported by a N. Y. State Science Service honorarium.

NELSON LIBERMAN, of the University of Buffalo, is preparing a petrographic study of the Onondaga limestone in western N. Y. for his master's degree.

SHEPHERD LOWMAN, of Rensselaer Polytechnic Institute is assembling data pertaining to the structural geology of the southwestern Catskills in Delaware County.

DONALD G. MILLER, of the University of Buffalo, is studying the mineralization of the Lockport dolomite in western N. Y. for his master's thesis.

PAUL T. MOYER, JR., of the University of Rochester, is studying the chert of the Onondaga limestone at Le Roy and Oaks Corners, N. Y., in an effort to support or reject the syngenetic, epigenetic, and replacement theories of origin. Megascopic description will be supplemented by microscopic study.

EMANUEL J. NIEVES, of New York University, is working on "Sediments and Microfossils in Upper New York Bay."

WILLIAM A. OLIVER, JR., of Brown University, has submitted two papers for publication, which have resulted from his State supported work on the Onondaga limestone of N. Y. State. They are "*Tornoceras* from the Onondaga Limestone of Central N. Y." and "Broherms and Biostromes of the Onondaga Limestone." The latter will appear shortly as a N. Y. State Museum Circular. Field work was continued in the stratigraphy of the Onondaga limestone.

SIDNEY PAIGE, of Columbia University, has submitted a paper to the G. S. A., in which he will attempt to show that all the sedimentary rocks in the Peekskill area are Paleozoic, including the Inwood limestone and Manhattan schist.

DAVID R. PEFLEY, of the University of Rochester, is mapping, as his master's dissertation, the bedrock geology of the southern half of the 15-minute Phelps quadrangle. The study involves 11 Middle and Upper Devonian formations. This work is being supported by a N. Y. State Science Service honorarium.

DONALD POTTER, of Hamilton College, began structural and stratigraphic studies in the Hoosick and Berlin quadrangles in an effort to establish the succession of beds in this deformed region. This was supported by the N. Y. State Science Service.

JAMES K. PRICE, of Cornell University, completed field work on the structure and sedimentary features of the Rensselaer graywacke at the Austerlitz outlier in Columbia County. Discussion and interpretation of new data will constitute his master's thesis. This work received a N. Y. State Science Service honorarium.

LAWRENCE V. RICKARD, of St. Lawrence University, has completed mapping of the 15-minute Richfield Springs quadrangle. Work was initiated (with DONALD W. FISHER) on the Clinton of east-central N. Y.

K. NORMAN SACHS, JR., of the University of Rochester, is studying the stratigraphic and geographic distribution of ostracods in the Moscow (Middle Devonian) shale in western and central N. Y. for his master's thesis.

ROBERT A. SANDERS, of Syracuse University, is continuing work on his master's thesis on the stratigraphy and structure of the Olney limestone in the Syracuse area.

PAUL R. SEABER, of the University of Rochester, is making a petrologic study of the late Ordovician and Silurian formations in the Genesee Gorge. A new road cut within the city of Rochester permits a more detailed study of the section than has previously been possible.

ROBERT M. SNEIDER, of the University of Wisconsin, has been making a detailed petrographic study of the Croton Falls mafic complex in southeastern N. Y. This is in conjunction with detailed mapping that he is carrying on along the N. Y. - Conn. state line.

LEWIS E. STOVER, of the University of Rochester, is completing work on the Moscow formation in central and western N. Y. for his doctoral dissertation. A detailed study of the megafossils has permitted zonation and the ostracodes of the upper, or Windom, member are to be described and illustrated.

W. M. STRONG, of Cornell University, mapped a previously unknown anticline in the Centerfield limestone on the east side of Cayuga Lake.

THOMAS TALMADGE, of New York University, is working on the "Geology of the Taconic Foothills Near Old Chatham, N. Y." for his master's thesis. The emphasis is on the structure of the area and an attempt to accurately map the boundaries of the formations.

IRVING TESMER, of Newark College, has completed mapping the 15-minute Clymer, Chautauqua, and Jamestown quadrangles. Together with the Westfield, Dunkirk, and Cherry Creek quadrangles; the bedrock geology of the region is to appear as a N. Y. State Museum Bulletin. This work was supported by the N. Y. State Science Service.

GEORGE THEOKRITOFF, of Mount Holyoke College, has been engaged in detailed mapping of the Lower Cambrian and Ordovician rocks of the Taconic sequence in the northeastern quarter of the 15-minute Fort Ann quadrangle. This work has been supported by a N. Y. State Science Service honorarium.

SEYMOUR TILSON, of New York University, is preparing a master's thesis on the geology of the 7½-minute Kingston, West quadrangle. Both structure and stratigraphy are being emphasized.

JOHN W. WELLS, of Cornell University, completed a study of two new occurrences of ammonoids in the Upper Devonian--two genera new to the State and one new to North America. More definite ideas of ammonoid zonation are expected from study of Middle and Upper Devonian ammonoids collected from the Cayuga meridian.

HARRY B. WHITTINGTON, of Harvard University, during the course of his trilobite investigations, has discovered that the trilobite protaspis described in 1893 by Beecher as an odontopleurid is actually a phacopid, the re-description of which will appear shortly in the Journal of Paleontology. Type material of Leonaspis tuberculatus has been re-described from the Devonian New Scotland limestone.

KEMBLE WIDMER, of the New Jersey Geological Survey, has submitted a draft of the geologic guide and itinery along the N. Y. State Thruway. This work, begun in 1952, is incomplete and will not appear for some time.

DONALD R. WIESNET, of the U. S. Geological Survey, has completed mapping the Paleozoic rocks of the Nicholville quadrangle and is continuing his bedrock mapping of the Paleozoics in the Mooers quadrangle.

GLACIAL GEOLOGY

WALTER ANDERSON, of the University of Rochester, is making a sedimentation study of unconsolidated Pleistocene sediments in the Pinnacle Hills in Rochester, N. Y. The problem entails, amongst other aspects, a qualitative comparison of heavy minerals in ice-and water-laid deposits.

In connection with the agronomic problem of drainage of wet soils, NEDAVIA BETHLAHMY, student at Cornell University, made limited observations of drift thickness and bedrock topography on experimental farms of Cornell University.

PAUL BLACKMON, of the University of Buffalo, has completed a survey of the Pleistocene geology of the East Aurora quadrangle. This will be submitted as a master's thesis.

JAY C. BRYANT, presently at the National Cancer Institute, completed a refinement of the upland glacial drift border in southern Cattaraugus County, an interpretation based on observations and mapping in connection with soil surveying in 1934 and 1935.

Field work has been completed on the surficial geology of the Delaware Basin, C. S. DENNY, of the U. S. G. S. in charge. A manuscript entitled "Surficial Geology and Soils of the Elmira-Williamsport Region of New York and Pennsylvania" is in preparation.

ROBERT J. LA FLEUR, of Rensselaer Polytechnic Institute, has continued his investigation of the glacial geology and sedimentology of part of the Troy quadrangle.

JOHN S. KING, of the University of Buffalo, is investigating the "Distribution and origin of sand and gravel deposits near the Buffalo area."

PAUL MACCLINTOCK, of Princeton University, and D. P. STEWART, of Marshall College, finished mapping the glacial geology of the St. Lawrence Lowland within the State. This was a four year project supported by the Geological Survey of the State Science Service.

ERNEST H. MULLER, of Cornell University, commenced investigation of the glacial geology of Chautauqua County, tying in with mapping in progress in Erie County, Pennsylvania and carrying eastward the correlation of drift sheets deposited by Cary (?) ice moving out of the Erie Basin.

ROBERT N. OLDALE, presently with the U. S. Geological Survey, Boston, Massachusetts continued study of glacial deposits in Stockbridge Valley south of Oneida. Principal objectives are mapping, analysis of mechanical constitution of the drift, and of till fabric with a view to distinction of till sheets.

ROBERT O. VARRIN, of Princeton University, acted as field assistant. He worked especially on the "sensitive" Champlain marine clays which are causing so much trouble in the Seaway construction and is writing his senior thesis on the subject.

ECONOMIC GEOLOGY

As an outgrowth of the recent regional survey by the New England-New York Interagency Committee, ELAINE M. LUEDKE and CHESTER T. WRUCKE, of the U. S. G. S. have prepared a manuscript and map entitled "Mineral Resource Map of N. Y. State."

The systematic investigation of the ground-water resources of N. Y. State was continued in 1955 by the U. S. G. S. in cooperation with the N. Y. Water Power and Control Commission, Nassau County Department of Public Works, Suffolk County Board of Supervisors, and the Suffolk County Water Authority. The work in 1955 was under the general supervision of JOSEPH E. UPSON and under the immediate supervision of ERWIN S. ASSELSTINE and RALPH C. HEATH.

The program in Upstate New York covers systematic investigation in each county, and consists of (1) the collection of data on the construction, yield, depth to water, and other data on existing wells; (2) generalized mapping of the bedrock and glacial deposits; (3) determinations of the chemical content of water from the different aquifers; and (4) the collection of data on the use of ground water. The results of each investigation are contained in reports published by either the Water Power and Control Commission or the U. S. G. S. At the end of 1955, reports containing information on the ground-water resources in all of 18 counties and part of 4 other counties had been published.

In 1955, ERWIN ASSELSTINE and I. G. GROSSMAN completed a report containing well logs and records of more than 1,000 selected water wells in Westchester County. I. G. GROSSMAN completed a manuscript containing the results of a ground-water investigation in Putnam County. A report on the ground-water resources of Greene County by JEAN BERDAN was published. WALTER WETTERHALL continued the investigation in Chemung County. FRED MACK continued the investigation in Ontario County and made special ground-water studies for the Atomic Energy Commission. HARRY WILSON continued the collection of data on wells in Oneida County.

On Long Island a report by J. J. GERAGHTY and N. M. PERLMUTTER on the geology and ground-water conditions in southern Nassau County, with particular reference to sea-water encroachment is nearly completed. Work is beginning on a similar investigation for northwestern Nassau County where it is hoped that considerable information on the glacial deposits will result.

D. A. DICKENS, of the N. Y. State College of Ceramics, reports that the contribution of the College of Ceramics to the state-wide economic survey of the limestone resources was continued through 1955.

In the months between successive field surveys the limestone samples were crushed, ground, tested and analyzed in the laboratories at Alfred. Chemical, petrographic, spectrographic and differential thermal analyses were made. Physical properties including absorption, specific gravity, soundness (durability), grindability and microscopic texture were determined.

One sampling crew of three men was in the field this summer. Two students, WILLIAM ROHE and JOHN KOSLOWSKI, assisted DICKENS in the operation of a diamond drill to obtain core samples,

Cooperating geologists of the State Science Service were DR. JOHN JOHNSEN and DR. JAMES DUNN.

New equipment and drilling techniques enables us to extend our maximum depth to 250 feet (100 feet more than in previous years). Approximately 1200 feet of limestone core was obtained from six different drill sites. Samples of Denmark, Shoreham, Kirkfield, Napanee, Chaumont, Lowville and Pamelia limestones (Trenton and Black River formations) were drilled.

One hundred fifteen samples are currently being crushed and ground in preparation for the various physical and chemical tests.

GEOPHYSICS

J. R. BALSLEY and A. F. BUDDINGTON published a short summary of some of their work entitled "Correlation of Reverse Remanent Magnetism and Negative Anomalies with Certain Minerals" in the Journal of Geomagnetism and Geo-electricity, vol. 6, No. 4, December 1954, pp. 176-181. This paper was based on the work of the U. S. G. S. in the Adirondacks.

SELECTED ARTICLES CONCERNING N. Y. GEOLOGY PUBLISHED DURING 1955

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CANNON, HELEN, "Geochemical Relations of Zinc-Bearing Pent to the Lockport Dolomite, Orleans County, N. Y." U. S. G. S. Bull. 1000-D, pp. 119-181.

FLOWER, ROUSSEAU H., "Status of Endoceroid Classification," Jour. Paleo., vol. 29, No. 3, pp. 329-371, 4 pls., 6 figs.

FLOWER, ROUSSEAU H., "New Chazyan Orthocones," Jour. Paleo., vol. 29, No. 5, pp. 806-830, 5 pls., 1 fig.

FLOWER, ROUSSEAU H., "Trails and Tentacular Impressions of Orthoconic Cephalopods," Jour. Paleo., vol. 29, No. 5, pp. 857-867, 4 text figs.

FRY, WAYNE L. and BANKS, HARLAN P., "Three New Genera of Algae from the Upper Devonian of New York," Jour. Paleo., vol. 29, No. 1., pp. 37-44, 2 plates.

GRAHAM, JOHN A., "The Mineral Industries of New York State," N. Y. S. Mus. Circ. 41, Aug. 1955, 76pp., 26 tables, 16 charts, 2 figs.

HAGNER, A. F. and COLLINS, L. G., "Source and Origin of Magnetite at Scott Mine, Sterling Lake, N. Y.," Science, vol. 122, No. 3182, pp. 1230-1231, 1955.

KINDLE, CECIL H. and EIDMAN, SEYMOUR H., "Fauna of the Kanouse Sandstone at Highland Mills, N. Y.," Jour. Paleo., vol. 29, No. 1, pp. 183-185.

KJELLESVIG-WAERING, E. N. and CASTER, KENNETH, "The Pterygotidae of the Silurian Vernon Shales of N. Y.," Jour. Paleo., vol. 29, No. 6, pp. 1041-1047, 2 text figs.

ROGERS, DOUGLAS, JR., "Sub-Devonian Exploration in the Northern Appalachian Basin," The Petroleum Engineer, March 1955, pp. B-35 to B-42.

SANFORD, JOHN, "An Old Pay with a Future," The Oil and Gas Journal, July 4, 1955, vol. 54, No. 9, pp. 156-157.

TESMER, IRVING H., "Restudy of Upper Devonian (Chautauquan) Stratigraphy and Paleontology in Southwestern N. Y. State," N. Y. S. Mus. Circ. 42, August 1955, 22 pp. 4 figs.

WIGGINS, JAMES W., "Developments in New York in 1954," Amer. Assoc. Petrol. Geol. Bull., vol. 39, No. 6, pp. 805-810, 1 fig.

WOODWARD, H. P., "Problems of the Deep Appalachian Basin," The Petroleum Engineer, March 1955, pp. B-50-B-56.

WORTHINGTON, JOSEPH E.,"Biogeochemical Prospecting at the Shawangunk Mine--A Case Study," 1955, Econ. Geol., vol. 50, No. 4, pp. 420-429.

ABSTRACTS - Appearing in December 1955 issue of the Bulletin of the Geol. Soc. Amer.

BOARDMAN, RICHARD S., "Morphologic Variation in Zoaria of Some Trepostomatous Bryozoa" (from the Middle Devonian Hamilton Beds of N. Y.)

FISHER, DONALD W., "Time Span of the Theresa and Potsdam Formations in the Region Peripheral to the Adirondack Mountains, N. Y."

PRUCHA, JOHN J., "Stratigraphic Relationships of the Fordham Gneiss in Southeastern N. Y."

RICKARD, LAWRENCE V., "Stratigraphy and Paleocology of the Lower Devonian Helderbergian series of N. Y."

SCOTFORD, DAVID M., "Axial-plane Folding" (Discussion of structure in metamorphics of Westchester County, N. Y.)

WHITTINGTON, H. B., "Beecher's Supposed Odontopleurid Protaspis is a Phacopid"

SUPPLEMENTAL LIST OF THESES ON N. Y. GEOLOGY

ALLENSON, SHERMAN T., Stratigraphy and structure of the southern part of the Camillus ($7\frac{1}{2}$-minute) quadrangle, Onondaga County, N. Y., 1955, M. S. -- Syracuse University

GILG, JOSEPH, Stratigraphy of the Skaneateles formation in Onondaga County, 1955, M. S. -- Syracuse University

HOROWITZ, SEYMOUR, Geology of the southwestern part of the Syracuse East ($7\frac{1}{2}$-minute) quadrangle, 1955, M. S. -- Syracuse University

PHILLIPS, JOHN S., Subsidence structures in Onondaga County, 1955, M. S. -- Syracuse University

RICKARD, LAWRENCE V., Stratigraphy and paleoecology of the Lower Devonian Helderbergian series in N. Y., 1955, Ph.D. -- Cornell University

SCHNABEL, ROBERT W., Petrographic study of the rocks exposed along Moose River between Lyons Falls and Fowlersville, N. Y., 1955, M. A. -- University of Buffalo

STIPP, HENRY, The stratigraphy of the West River formation, 1955, M. S. -- University of Buffalo